

# **CB Ranch – DNRC Land Exchange Environmental Assessment**

**Ravalli County, Montana**



**July 2007**

# **CB Ranch – DNRC Land Exchange Environmental Assessment (EA)**

## **COVER SHEET**

**Proposed Action:** The Montana Department of Natural Resources and Conservation and CB Ranch propose a land exchange in southern Ravalli County. DNRC would receive two sections (1,280 acres) of timberland in upper Rye Creek, north of the Sula State Forest in exchange for one section (640 acres) of isolated DNRC land northeast of Darby.

**Type of Document:** Environmental Assessment

**Decision Maker:** Montana State Land Board  
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**Special Note:** Comments received in response to this proposal will be available for public inspection and will subsequently be released in their entirety pursuant to the Montana Constitution.

# **Introduction and Guide to this Environmental Assessment**

This document was written and arranged to provide the DNRC Management and members of the State Land Board with sufficient information to make an informed and reasoned decision on the proposed CB Ranch Land Exchange. The document also lends itself to inform the public and interested parties of this project's benefits to, and impacts on, the Trust, public access, community interests and the environment.

The EA consists of the following chapters and key elements:

1. **CHAPTER 1 – PURPOSE AND NEED**
2. **CHAPTER 2 – ALTERNATIVES**
3. **CHAPTER 3 – AFFECTED ENVIRONMENT AND EFFECTS**
4. **APPENDICES A – D**
5. **FIGURES 1 – 6 – Maps of the Region, Project Area and Specific Tracts**

**Chapter 1** provides summary details of the proposed exchange, including purpose and need, and key issues. **Chapter 2** describes the regulatory environment for land exchanges along with the alternatives considered in the assessment. **Tables 2.1 and 2.2** at the end of Chapter 2 compare and highlight the effects of the identified alternatives and their ability to achieve the purpose and benefits of the proposed exchange. **Chapter 3** provides information on the existing conditions of the lands and potential effects of the proposed exchange on their attributes and resources. It also summarizes the analytic basis for comparison of the alternatives presented.

**Figures 1 through 5** illustrate the project in maps at various scales. **Figure 1** provides a regional view and scale while **Figure 2** gives a more local perspective, showing the close proximity to the Sula State Forest and other state and Forest Service lands. **Figures 3, 4 and 5** show the specific tracts – both from adjoining landownership and from an aerial photo view – in greater detail. These maps illustrate the road system, streams and general characteristics of the properties.

A list of **Agencies or Persons Contacted** and **References** are provided at the end of Chapter 3. Additional references are provided in Appendix A.

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## CHAPTER 1 – PURPOSE AND NEED

### 1.0 INTRODUCTION

Chapter 1 provides summary and background information regarding the CB Ranch land exchange proposal, identifies the purpose and need, the scope of the proposal and analysis, public scoping, and issue resolution. Figure 1, following the text, is a general vicinity map showing the location of the proposed land exchange.

### 1.1 PROPOSAL SUMMARY

This environmental assessment (EA) addresses a proposal to exchange 640 acres of Montana School Trust land northeast of Darby in the upper Bitterroot Valley for either 1,280 or 960 acres of land in the upper Rye Creek drainage owned by CB Ranch (refer to Figure 1).

The exchange is being considered by Montana DNRC to acquire valuable timberland adjoining the Sula State Forest, providing greater acreage and revenue for the Trust, protect important wildlife habitat and provide enhanced public and administrative access to state land in the Rye Creek drainage, and to consolidate land ownership for both DNRC and CB Ranch. It would dispose of an isolated and inaccessible section of state land that is steep and with limited productivity.

### 1.2 BACKGROUND INFORMATION

CB Ranch currently owns various tracts of land that are adjacent to state DNRC land in the Rye Creek drainage. Specifically, Section 1 in T3N, R20W and Section 25 in T3N, R19W. This property consists of two sections totaling 1,280 acres. These parcels are remnants of the former Darby Lumber Co. holdings which were part of an old railroad land grant to the Northern Pacific Railroad, forming a checkerboard ownership

that dates back to the early 1900's. Another tract adjacent to Section 25 was considered for exchange: Section 23 in T3N, R19W was assessed but removed from consideration based on the superior timber production potential in Section 1 and its contiguous boundary with existing State Section 36. There are four remaining parcels nearby in the Rye Creek drainage that CB Ranch owns and proposes to exchange to the Bitterroot National Forest. None of these were considered for exchange with the State due to the superior location and site conditions of the two selected private tracts.

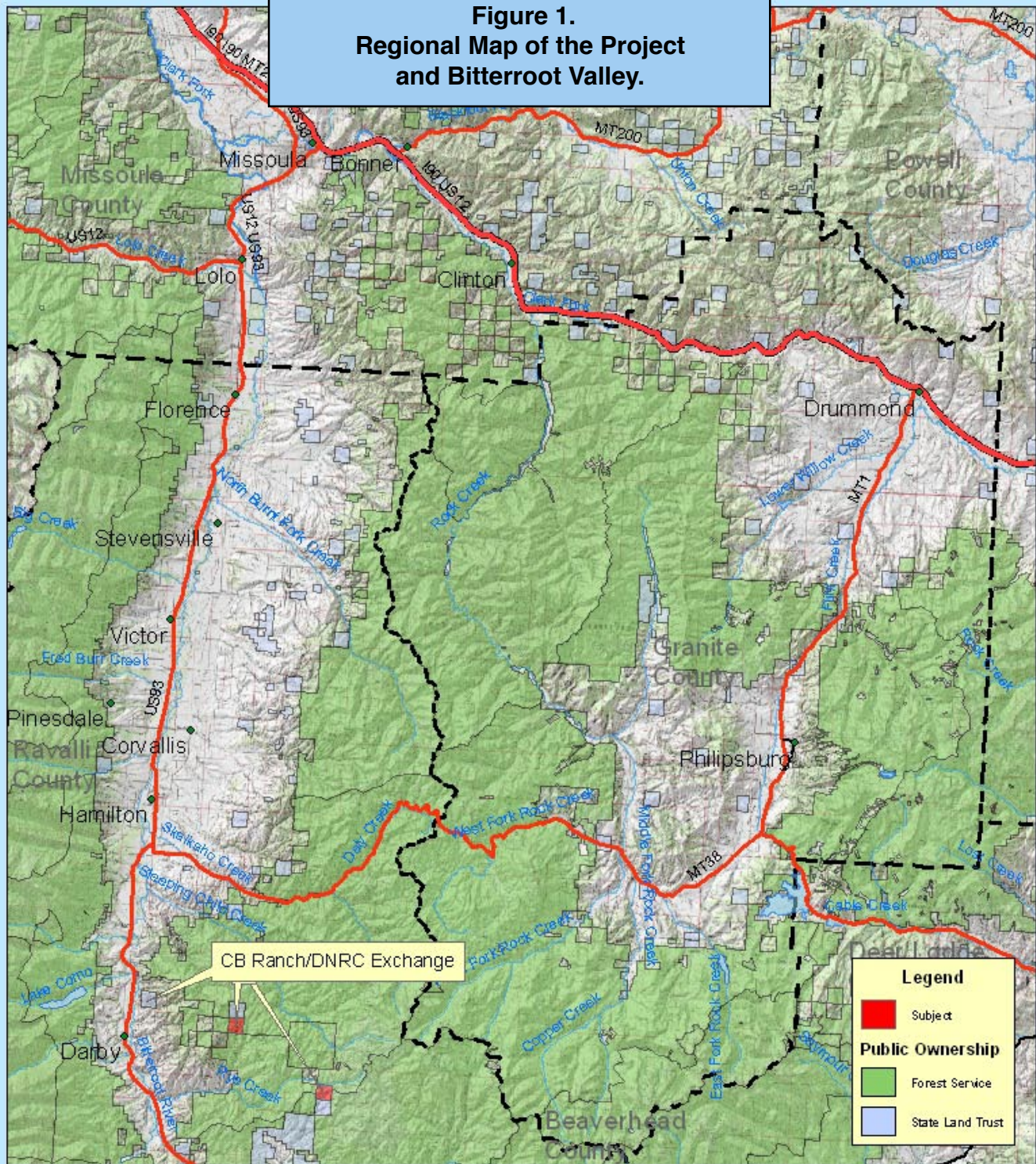
CB Ranch has actively sought to consolidate its holdings on the east side of the Bitterroot River in the Rye Creek drainage. This would eliminate the long-standing checkerboard ownership and bring more consistent and cost-effective management to private and public lands in the drainage. The CB Ranch nearly surrounds the state section 36 in T4N, R21W, which is the subject of this proposed exchange.

CB Ranch has placed approximately 1,940 acres of land under a conservation easement with the Rocky Mountain Elk Foundation (RMEF 2004). It is the intention of CB Ranch to place lands acquired in the state DNRC and Forest Service exchanges under this same easement, although it is not a condition or requirement of the proposed exchanges. Overall, this action would provide for permanent protection of the wildlife and forest resources, and provide for enhanced public access and recreational opportunities.

The DNRC Southwest Land Office (SWLO) Area Manager and representatives of CB Ranch signed an Agreement to Initiate (ATI) for a land exchange between CB Ranch and Montana DNRC on 26 April 2006. This agreement included the specific tracts



**Figure 1.  
Regional Map of the Project  
and Bitterroot Valley.**



0 7.5 15 Miles

SCALE

1:556,000

1 inch equals 8.8 miles

MAP IS INTENDED TO SERVE AS A VISUAL GUIDE  
AND ITS ACCURACY IS NOT WARRANTED



August 2006  
Norman C. Wheeler  
&  
Associates  
Bozeman, Montana



identified in Section 1.4, with the understanding that the state DNRC section did not have legal public or administrative access.

The lands involved in the proposed exchange are shown on maps and aerial photos in Figures 3, 4 and 5 at the end of Chapter 2. The project area for this analysis includes the specified lands proposed for exchange as defined in Section 1.4.

### 1.3 PURPOSE AND NEED

The purpose of this project is to acquire valuable timberlands that represent important fish and wildlife habitat – including critical elk and mule deer winter range – adjacent to state lands in and near the Sula State Forest, and consolidate land ownership.

The SWLO identified the two preferred sections because of their position in the headwaters of the North Fork of Cameron Creek on the northern border of the Sula State Forest (Section 25) and immediately adjoining existing state land section 36 in the North Fork of Rye Creek drainage (Section 1). Both sections have significant timber production potential and have very good access.

The proposed DNRC exchange tract lies within the CB Ranch and provides limited timber production, with approximately 160 acres forested on a steep north-facing slope. Likewise, grazing potential is limited due to steep terrain and lack of perennial water. It does not have legal access and as a result has not been actively managed by DNRC.

Both DNRC and CB Ranch tracts are considered important big game winter range and currently provide (along with the surrounding State and National Forest lands) valuable uninterrupted wildlife habitat.

The lands currently owned by CB Ranch in the Rye Creek drainage were part of a U.S.

land grant to the Northern Pacific Railway Company, patented in 1905 and 1910. Over the years, these lands were held as mineral and timber interests and finally merged with Burlington Northern Railroad Co in 1988. The lands were conveyed to Plum Creek Timber Company (1988 and 1989). The mineral rights were severed and retained by Burlington Resources (its former subsidiary Meridian Minerals and Meridian Oil) in 1989. Burlington and Plum Creek both conducted industrial logging on these lands, starting in the early 1970's. Plum Creek sold the lands to Bob Russell and newly formed Darby Lumber Company in 1992. At this time, the lands were heavily logged with some areas extensively roaded and cutover. As the timber was removed and Darby Lumber began liquidating assets, the lands were offered for sale. The Trust for Public Land (TPL) stepped in and optioned the lands – acting on local citizens' concerns and with broad support including the Ravalli County Commissioners, the Forest Service and ultimately the Montana Congressional Delegation to secure and protect these important lands. Darby Lumber attempted to sell the lands to CB Ranch while still under contract with TPL. The ensuing litigation resulted in a settlement that directed most of the lands to TPL and ultimately the Bitterroot National Forest. Other lands went to the CB Ranch and resulted in extensive cleanup after the fires of 2000. The current exchange proposal is part of an effort with Montana DNRC and the Bitterroot National Forest to eliminate inholdings within the Rye Creek drainage and CB Ranch, and to better align property boundaries between private and public land.

The State Trust Land offered for exchange is an isolated section 36 that has been managed and leased for grazing for many years. This tract is surrounded on all sides by private land. Access is across private land, difficult and limited to a small two-track road that goes up Gorus Gulch. Most of the section is steep hillsides that descend to either Gorus Gulch or Mike Creek. The upper (east and



northern) portions of the section burned during the fires of 2000.

There are no wetlands associated with the DNRC tract. The tract is located outside of the boundary of the National Forest, is isolated from other state land, and is not legally accessible to the public.

The land exchange is supported by many in the community to ensure that inappropriate residential development does not occur along this section of Rye Creek, thus protecting critical winter range for elk and mule deer and minimizing erosion and water quality degradation in Rye Creek and the upper Bitterroot River. Private land south of the proposed exchange parcels at Dugout Gulch and North Fork of Rye Creek has been subdivided and some of it developed.

The exchange is also proposed in order to eliminate problems in DNRC management of an isolated, difficult to manage parcel, simplify landline management, and consolidate land ownership in both the Rye Creek drainage and in the Sula State Forest. The lack of access to the state section 36 has been a long-standing barrier to efficient management and public use and benefit.

Part of the need for this analysis is to disclose whether the proposed land exchange is in the best interest of the public and the state School Trust. Please refer to Chapter 2, Section 2.1.1.

## 1.4 PROPOSAL

Montana DNRC would acquire, through the proposed land exchange, the following lands and mineral estates located in Ravalli County, Montana, subject to the outstanding mineral estate affecting Section 1:

### T3N, R19W.

**Section 25:** All, as more particularly shown and described in Book 226 of Deeds, page 175, records of Ravalli County, Montana. Minerals for section

25 have been secured and result in a full fee and mineral estate for exchange.

### T3N, R20W.

**Section 1:** All, as more particularly shown and described in Book 226 of Deeds, page 175, records of Ravalli County, Montana. Minerals for section 1 are reserved by Burlington Resources.

This property, herein referred to as sections 25 and 1, respectively, consists of 1,280 acres in the Rye Creek and Cameron Creek drainages of the Sapphire Range, east of Darby, Montana. In addition to the exceptions to title summarized here, a more detailed description is provided in the Application for Land Exchange, property title report and the Report of Mineral Potential; all three are contained in the project file at the Southwestern Land Office of DNRC, 1401 27<sup>th</sup> Avenue, Missoula, MT 59804.

The mineral estate of the land in section 1 is severed and held by Burlington Resources. CB Ranch needs only convey the full mineral estate contained in section 25 to provide parity for the mineral estate of equal value in section 36.

Montana DNRC would convey the following lands and mineral estates located in Ravalli County to CB Ranch:

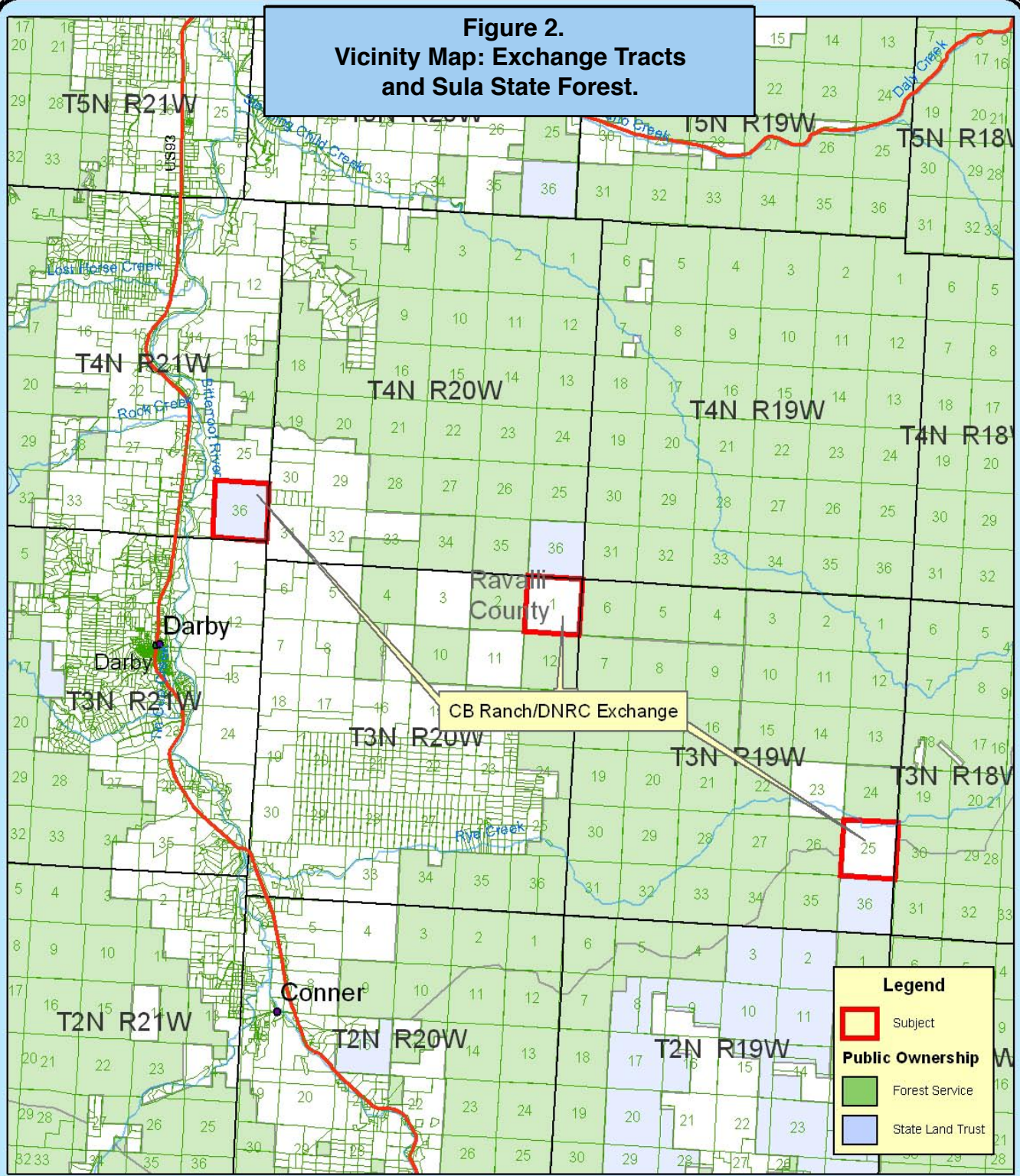
### T4N, R21W.

**Section 36:** All.

This property, herein referred to as Section 36, consists of 640 acres located about 2.5 miles NE of Darby, Montana. Full mineral rights will be exchanged for like minerals on Section 25 from CB Ranch.

There are no existing mining claims associated with State section 36. Mineral assessments conducted on these properties and surrounding lands in the Rye Creek drainage by the Bitterroot National Forest

**Figure 2.**  
**Vicinity Map: Exchange Tracts**  
**and Sula State Forest.**



0 2 4 Miles

SCALE  
 1:152,000  
 1 inch equals 2.4 miles

MAP IS INTENDED TO SERVE AS A VISUAL GUIDE  
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September 2006  
 Norman C. Wheeler  
 &  
 Associates  
 Bozeman, Montana



show very limited potential for economic mineral development (BRNF 1998).

There are no existing public roads associated with the tract, and there are no land use licenses, special use permits or encumbrances.

The tract is currently leased as a grazing allotment, sustaining approximately 47 AUMs. CB Ranch owns the adjacent private land that is tied to the grazing permit, has leased the grazing since 2004 and would have preference for continued issuance of the grazing permit.

There are no wetlands or water rights associated with section 36.

## 1.5 SCOPING AND PUBLIC INVOLVEMENT

Legal notice of the proposed land exchange was published in the *Ravalli Republic* and *Missoulian* newspapers (Hamilton and Missoula, Montana). The Ravalli County Commissioners, Montana Congressional delegation, local Legislators, and Tribal governments were contacted. Notice of the proposed land exchange was mailed to the SWLO's list of interested parties, and the proposal was included on the DNRC website. Thirteen respondents provided substantive written comments.

The staff report to the Land Board in December 2005 includes preliminary reviews by resource specialists to determine any environmental concerns regarding the proposal; no concerns were identified.

## 1.6 ISSUES

### Key Issues

During the initial scoping process, there was expression of overwhelming support and approval for the proposed exchange. A broad diversity of interest groups, recreation

and conservation organizations, local government and individuals provided comments of support and encouraged the DNRC to proceed with the exchange. Two landowners, with property contiguous to the State section 36, expressed concerns over loss of access to the State land and the resulting potential decrease in their property value.

Because this assessment is focused on the potential effects of changing ownership of the State DNRC tract and the 2 CB Ranch tracts, it was determined that the primary issues for this document, based on public and agency comments, are:

Issue #1 – How will the proposal and its alternatives affect access, recreation and sport hunting on Rye Creek lands?

The EA evaluates the potential effects of the proposed land exchange and alternatives on public access, restoration and protection of wildlife habitat.

Issue #2 – How will the proposal and its alternatives affect post-fire wildlife rehabilitation and restoration?

The EA evaluates the potential effects of the proposed land exchange and alternatives for reforestation and recovery of lands, both for the private timberlands and the state section.

Issue #3 – How will the proposal and its alternatives affect DNRC and the public's legal access to state land?

The EA evaluates the potential effects of the proposed land exchange and alternatives on access to state land, specifically legal access to Sections 1, 25 and 36, and DNRC's ability to manage State lands.

### Other Issues

#### *Appraisal Procedure*

The land appraisal for State and private parcels was completed by Paraic Neibergs

under contract to DNRC, reviewed and approved by DNRC staff appraiser Tom Konency in accordance with state standards.

### ***Array of Alternatives***

Different assumptions on valuation of property prompted the need for the analysis to include a range of alternatives. Three alternatives are analyzed in detail and several others were considered but not studied in detail for the reasons stated in Chapter 2, Section 2.3. If an alternative was not acceptable to DNRC Staff or CB Ranch, then it was not analyzed in detail, except as the “no action” alternative.

### ***Future Development/Land Uses/Mineral Rights***

There were concerns expressed about the future development in the Rye Creek drainage if timberlands remained in private ownership. There was considerable interest by developers in the Darby Lumber lands when they were being offered in the late 1990’s. Parts of the former Wallace Ranch and other tracts in the vicinity had been subdivided and developed as residences. They were used in this analysis as a basis for describing and comparing the effects of the alternatives in Chapter 3. Alternative B (no action) is the “future development” alternative.

Previous concern focused on changes in land uses for the two exchange tracts – from commercial timberland to subdivided recreation and home development. As discussed in Section 1.5, this analysis is focused on the exchange of land, specific future land uses are not on the table for decision. However, reasonably foreseeable activities are considered in the effects analysis, particularly as they relate to

potential cumulative effects, disclosed in Chapter 3.

State policy and minerals staff preference suggests obtaining full surface and sub-surface estates. As disclosed in Section 1.4, the mineral estate associated with the land in Section 25 has been acquired from Burlington Resources and is included in the exchange. The mineral estate in Section 1 is severed and not available to include in the exchange. The Report of Mineral Potential contained in the project file discloses that due to the small size and apparent limited value of any potential mineral resource, there is only a small risk of any future attempt to develop the mineral potential by the holders of the outstanding interest. Any future mineral development would have to comply with State law. Mineral potential is summarized in Chapter 3, Section 3.3.5.

### ***Other***

There were several inquiries regarding heritage resources, fish, recreation, viewshed, old growth, threatened, endangered and sensitive species, economics, and roads. Information regarding these resources is disclosed in Chapter 3, Section 3.3.5.

The following items were not identified as concerns during scoping, however, given the extent of surrounding public lands in the project area, it is important to address them:

Parcels considered in the Rye Creek drainage do not contain (or are not contained within) any Congressionally designated areas, inventoried roadless areas, research natural areas, caves or other special features, therefore impacts to them have not been analyzed or addressed in this EA.



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## CHAPTER 2 – ALTERNATIVES

### 2.0 INTRODUCTION

In this chapter, we describe the regulatory framework for land exchanges and the alternatives considered in the analysis. Tables 1 and 2 summarize the effects of the alternatives and their ability to meet the purpose and benefits, based on the analysis presented in Chapter 3, with supporting documentation contained in the project file. The following maps follow the text: Figure 1 – Regional Map of the Project and Bitterroot Valley, Figure 2 – Vicinity Map: Exchange Tracts and Sula State Forest, and Figures 3 through 5 – Subject Properties.

### 2.1 REGULATORY FRAMEWORK FOR LAND EXCHANGES

This proposed land exchange is being considered under the authority of the Montana Constitution, Article X Sect 11(4) and Montana Code (77-2-201 through 217 MCA).

Direction regarding land exchanges is authorized in Montana's Constitution and Enabling Act (1889) which expressly requires that Trust Lands be managed to provide revenue in support of the beneficiaries of the Trust Lands. Further clarification is provided in Montana Code (77-2-203 through 217 MCA). The DNRC's Real Estate Management Bureau has the administrative authority and responsibility to engage and develop land exchanges. The State Land Board has ultimate authority to implement land exchanges (Article X, Section 4, 1972 Montana Constitution).

Land exchanges are discretionary, voluntary real estate actions between the State and other parties, typically private landowners. Until the parties enter into a legally binding exchange agreement, any party may withdraw from and terminate an exchange proposal at any time during the exchange

process. The Director may complete an exchange only after final approval is given by the State Land Board with a determination that the exchange is in the best interest of the Trust.

#### 2.1.1 The Best Interest of the Trust

When considering the best interest of the Trust, the Director shall give full consideration to the opportunity to achieve better management of State lands and resources, to meet the needs of State and local residents and their economies, appropriately maximize long-term income to the Trust Land Accounts, and to secure important objectives, including but not limited to: protection of fish and wildlife habitats, heritage resources, watersheds, and aesthetic values; enhancement of recreation opportunities and public access; consolidation of lands and/or interests in lands, reduction in forest boundary survey and management costs; consolidation of split estates; expansion of communities; accommodation of existing or planned land use authorizations; promotion of multiple use values; implementation of applicable management plans; and fulfillment of public needs.

To determine that an exchange is in the best interest of the Trust, DNRC shall assess and report on the following 7 criteria:

1. Equal or Greater Value: This exchange is based on a greater than equal value to the Trust, up to 2:1 in acres and approximately the same in land value. Based on the approved appraisal, completed by DNRC contractor, the Trust will receive between \$1,296,000 and \$896,000 greater value for the exchange. Further, the DNRC will have much better access to the timberlands and DNRC economic analysis projects significantly higher returns from the

- 
- future sale of timber than currently realized from grazing fees on the exchange parcel.
2. State Land Bordering on Navigable and/or Public Use Waterways: There are no navigable waterways in either the state section or private sections proposed for exchange. Small perennial and ephemeral streams occur on both state and private parcels but offer limited public use or recreation in the form of water front property.
  3. Equal or Greater Income to the Trust: The state parcel is primarily grassland, with approximately 160 acres of timberland. It currently is leased as a grazing allotment for 47 AUMs, generating \$197.00 in 2006. Projections over 60 years based on current values and revenue estimates for timber, grazing and potential leasing are presented in the analysis summary of Appendix D.
  4. Equal or Greater Acreage: As noted in Item 1, the proposed exchange would result in the Trust receiving significantly greater acreage, up to twice the 640 acres of state land.
  5. Consolidation of State Lands: The proposed exchange would result in consolidation of state land into larger blocks and provide excellent access. One section is immediately to the north of the Sula State Forest and would allow the acquisition of the remainder of the northernmost drainage – the North Fork of Cameron Creek. The second section is immediately adjacent to existing state section 36 in the Rye Creek drainage. The state parcel slated for exchange is an isolated tract, surrounded by private land and with limited access.
- The intended use of the conveyed State lands will be consistent with the established management objectives on adjacent State lands and provide economic returns for the Trust.
6. Potential for Long-Term Appreciation: The private parcels are all timberlands with excellent growth and production capabilities. Access is very good. The 60-year economic analysis on these CB Ranch parcels indicates a greater economic return than state lands proposed for exchange.
  7. Access: Public and administrative access would be excellent under the proposed exchange. The existing road system in the Rye Creek drainage serves both parcels for timber and land management as well as extensive recreational uses. Currently the access to the state section 36 is by permission across private property on a 2-tract road.
- An Agreement to Initiate (ATI) was signed between DNRC and CB Ranch the DNRC shall undertake an environmental analysis in accordance with the Montana Environmental Policy Act as amended (75-1-101 MCA), Montana law on exchange of timberlands (77-2-201 through 217 MCA), and DNRC exchange policies and procedures. In making this analysis, DNRC may consider timely written comments received in response to the published exchange notice.
- Information on the Land Appraisal for the proposed land exchange is included in Chapter 3, Section 3.3.5.

### 2.1.2 Management Plans

The acquired lands would be classified as forest lands and managed as a part of the Hamilton Unit. Those lands classified as

forest lands are primarily valuable for the production of forest products. Classified forest lands are managed in accordance with the State Forest Land Management Plan and Administrative Rules of Montana (ARMs).

The 3-year timber management activities list does not include any activities for the affected lands in this proposal. If successfully conveyed, the lands would be included in forest management activities and planning.

## 2.2 ALTERNATIVES CONSIDERED IN DETAIL

### 2.2.1 Alternative A: The Proposal

The CB Ranch Sections 1 and 25 in the Rye Creek drainage, identified in Chapter 1, Section 1.4 would be conveyed to the State of Montana. Section 25 would become part of the Sula State Forest. State Section 36 identified in Chapter 1, Section 1.4 would be conveyed to CB Ranch.

### 2.2.2 Alternative B: No Action

The DNRC would withdraw from the ATI and the proposed land exchange would not be completed. CB Ranch's 2 sections in the Rye Creek drainage would remain in private ownership; the State Section 36 would remain in State ownership.

### 2.2.3 Alternative C: 1.5:1 Exchange

This alternative was developed based on concerns of equitability and proper valuation on the exchange. In Alternative C, one-half of Section 1 of the CB Ranch tracts would be withheld from the exchange. The exchange would go forward as a 1.5 to 1 exchange rather than the 2:1 exchange outlined in Alternative A. The northern one-half of Section 1, which is contiguous with State section 36, would be exchanged to the State. While Alternative C would still provide the State with a significantly beneficial exchange, this brings the

exchange closer to parity. The remainder of Section 1 would likely become part of the Bitterroot National Forest, as a part of that private-federal exchange.

## 2.3 ALTERNATIVES NOT ANALYZED IN DETAIL

Four additional alternatives were considered, but dropped from detailed analysis; they are briefly described here.

- **Purchase:** The proposed land exchange was developed and put forth prior to DNRC implementation of its Land Banking program. Sale of State land and the resulting loss of public land has generally been a contentious issue in the Bitterroot Valley. While the purchase alternative seems viable, it was deemed more appropriate to offset the conveyance of public land to private by an equal or greater amount of private land to public. The public is best served by more productive timberland and greater access for recreation.
- **Different Tracts:** As stated in Chapter 1, Sections 1.2 and 1.5, the tract identified in the proposal is the only state-owned tract contained within the CB Ranch and therefore the only state tract that CB Ranch is interested in obtaining. Alternatives that proposed different state exchange tracts were not pursued. Several alternatives were available for private tracts to be exchanged to the state. After consultation with DNRC's Hamilton Unit Manager and staff at the SWLO, sections 25 and 1 were selected for reasons described in Chapter 1, Sections 1.1 and 1.2. In short, the selected private tracts offered outstanding opportunities to secure productive timberland with excellent access. Section 25 also completes the northern watershed boundary of the Sula State Forest,

allowing the DNRC to manage the entire upper watershed of the North Fork of Cameron Creek and add valuable forest land to the Sula State Forest.

- **Exchange with Deed Restriction or Protective Covenants:** Completing the exchange with the addition of deed restrictions/covenants (restrictions limiting use of the land) on State section 36 was considered and discussed by proponents.

State section 36 has approximately 160 acres of timberland on steep north facing slopes. A professional timber cruise found 910 thousand board feet on the tract, predominantly Douglas fir and some larger Ponderosa pine along the ridgeline (Hayes 2005). With a residual of 2,000 board feet per acre, it was determined this tract to have approximately 640,000 board feet of merchantable timber. All of the timber is in a north-facing slope above Gorus Gulch and Mike Creek and the species mix and size is of limited commercial value. The site has no legal access and even if access were secured the construction of access roads and distance to mill would prove marginally economical and result in environmental impacts.

Contacts with Tribes and a cultural survey of State Section 36 revealed no cultural sites or Traditional Cultural Properties that might be adversely affected by the proposal or alternatives, so a need for a deed restriction/protective covenant related to cultural resources was not identified. A full cultural assessment and report has been completed, reviewed and approved, and is on file

at the SWLO and with DNRC's staff Archaeologist in Helena.

While CB Ranch would have full discretion on what they could do with the property should the exchange go forward, any future uses of the land would occur within the constraints of applicable laws and regulations, including but not limited to, clean air laws, the Endangered Species Act, county subdivision and development standards, etc. It is the intention of CB Ranch to place Section 36 under the current conservation easement that already exists on adjacent CB Ranch lands, held by the Rocky Mountain Elk Foundation. Any covenants on the parcel prior to exchange would likely reduce its value and potentially result in acquisition of fewer acres from CB Ranch.

DNRC staff and consultants determined that consideration of the three alternatives described in Section 2.2 and previously in this section meets DNRC regulations regarding a reasonable array of alternatives.

## 2.4 COMPARISON OF ALTERNATIVES

Table 1 summarizes the detailed analysis contained in Chapter 3 describing the effects of the alternatives on the key issues (identified in Section 1.6). Table 2 summarizes the detailed analysis contained in Chapter 3 describing the ability of the alternatives to meet the purpose and need. There is essentially no difference in the potential effects of Alternatives A and C regarding the key issues and ability of the alternatives to meet the purpose and need.



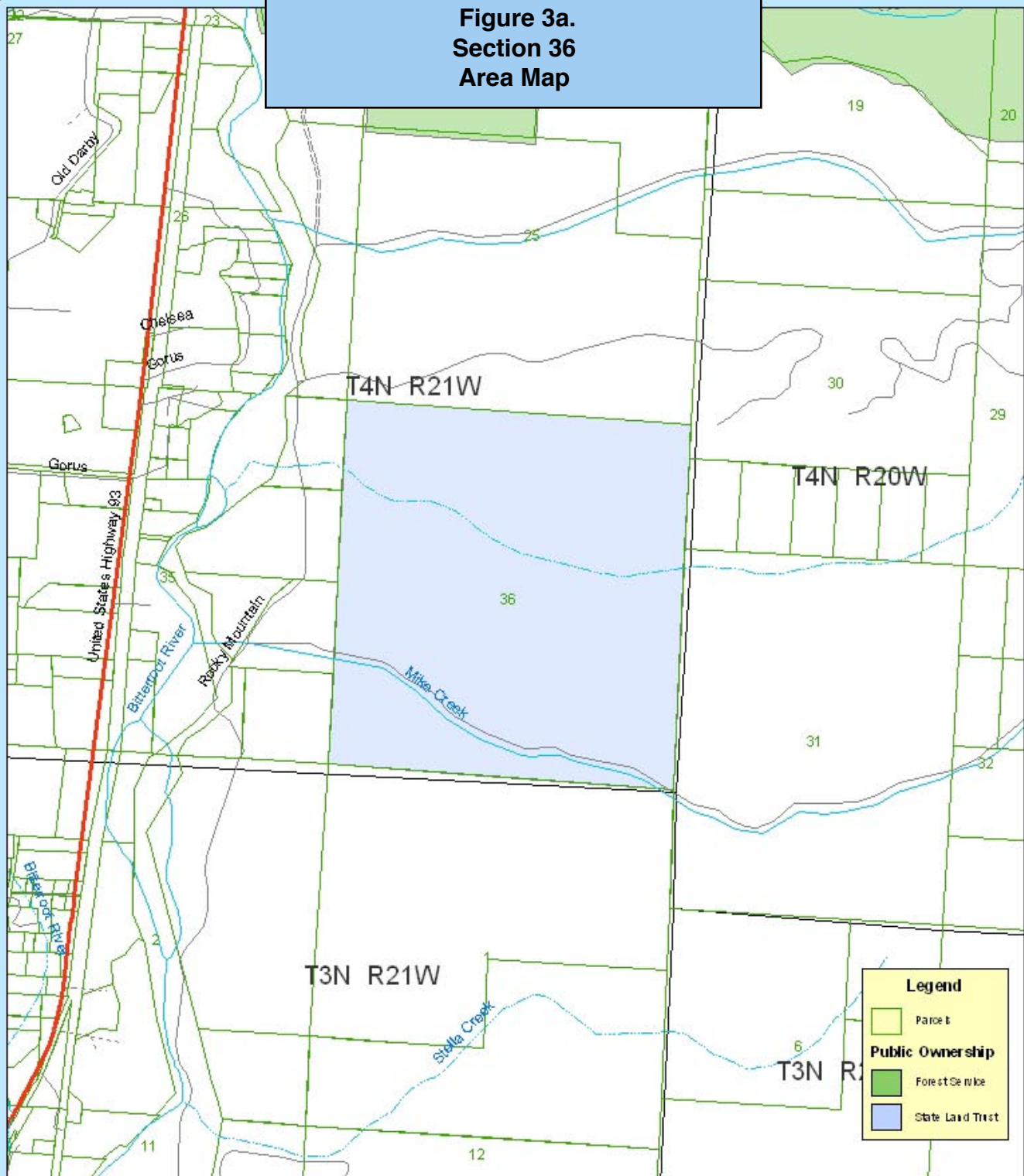
**Table 1. Comparison of the Effects of the Alternatives According to the Key Issues**

Issue	Alternative A (Exchange)	Alternative B (No Action)	Alternative C (1.5:1 Exchange)
#1 – Access and recreation on Rye Creek lands	Ensures legal access, recreation and sport hunting on both Rye Creek sections 1 and 25	Does not ensure legal access to Sections 1 and 25	Ensures legal access, recreation and sport hunting on Section 25 and one-half of Section 1
#2 – Post-fire habitat treatment and wildlife restoration	Restoration of wildlife habitat and winter range; consolidates habitat	Potential future displacement of wildlife from winter range; habitat remains susceptible to fragmentation	Restoration of wildlife habitat and winter range; consolidates habitat
#3 – Legal Access to Rye Creek tracts for DNRC and public	Assures full public and DNRC access and use of State land	Continued restricted access and use of State land	Assures full public and DNRC access and use of State land

**Table 2. Ability of the Alternatives to Meet the Purpose and Need**

Purpose & Need Criteria	Alternative A (Exchange)	Alternative B (No Action)	Alternative C (1.5:1 Exchange)
Acquire productive timberland and important wildlife habitat	Important timberlands and wildlife habitat within Rye Creek drainage are acquired	Important timberlands and wildlife habitat within Rye Creek drainage are not acquired	Important timberlands and wildlife habitat within Rye Creek drainage are acquired, to a lesser extent than Alternative A
Eliminate loss or fragmentation of timberlands, wildlife habitat and improve public access to public lands within Rye Creek	Ensures DNRC control over management or development on land bordering Sula State Forest. Land management is consistent and access is improved	Future residential development is possible along near Sula State Forest and within Rye Creek drainage  Public and administrative access is still restricted – on private tradelands and State section 36	Ensures DNRC control over management or development on land bordering Sula State Forest. Land management is consistent and access is improved
Consolidate Ownership	Consolidates ownership around Sula State Forest and Rye Creek drainage	Does not consolidate ownership along Rye Creek or near Sula State Forest	Consolidates ownership around Sula State Forest and Rye Creek drainage
Best Interest of the Trust	Resource values and public objectives served by the CB Ranch-Rye Creek sections exceed the resource values and public objectives served by State section 36	The potential use of the CB Ranch exchange sections may conflict with established management objectives on adjacent State and Federal lands	Resource values and public objectives served by the CB Ranch – Rye Creek sections exceed the resource values and public objectives served by State section 36

**Figure 3a.  
Section 36  
Area Map**



0 0.5 1 Miles

SCALE

1:24,000

1 inch equals 0.4 miles

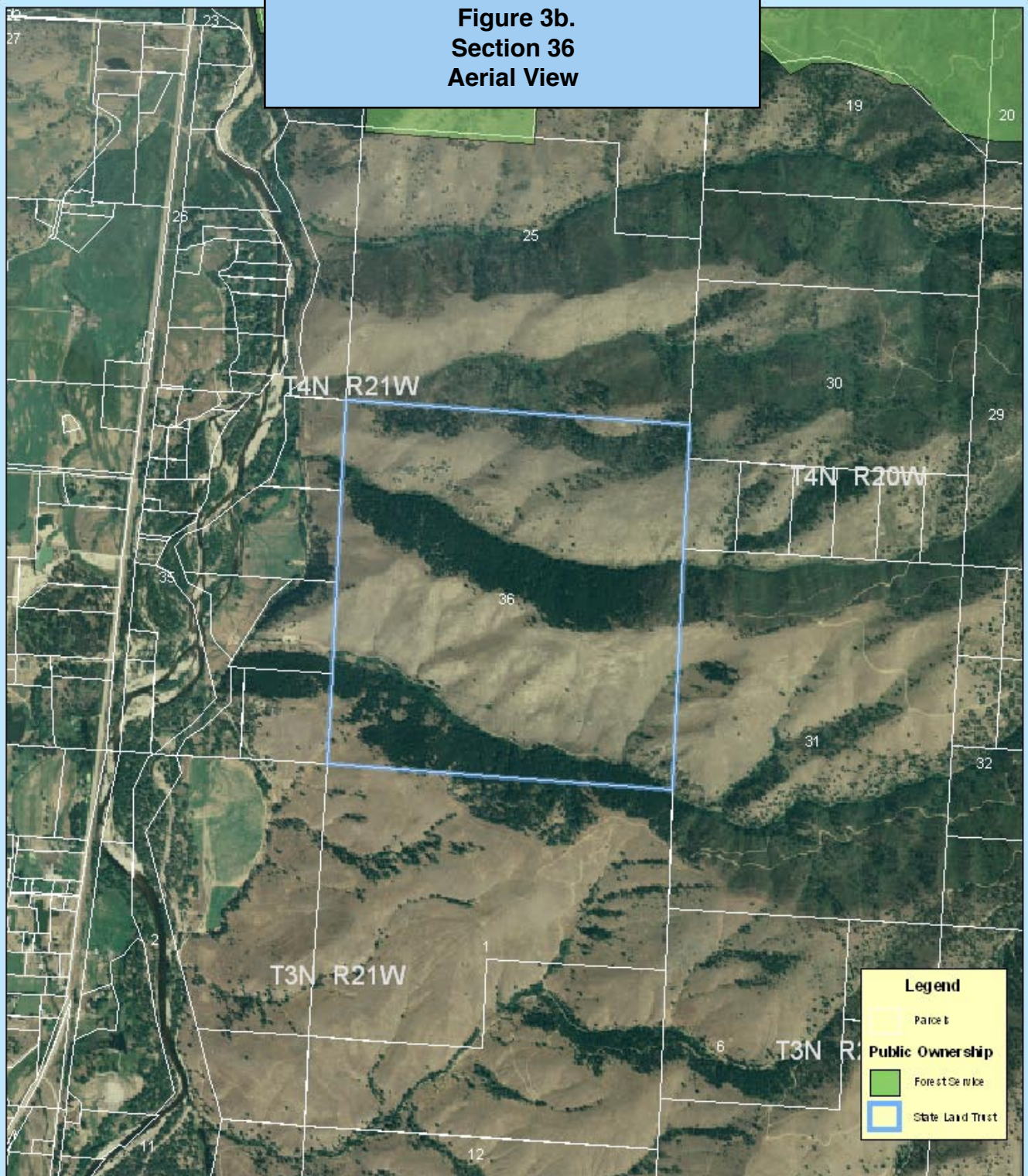
MAP IS INTENDED TO SERVE AS A VISUAL GUIDE  
AND ITS ACCURACY IS NOT WARRANTED



August 2006  
Norman C. Wheeler  
&  
Associates  
Bozeman, Montana



**Figure 3b.  
Section 36  
Aerial View**



0 0.5 1 Miles

**SCALE**

1:24,000

1 inch equals 0.4 miles

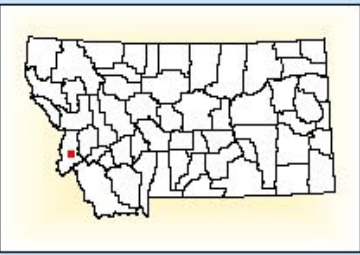
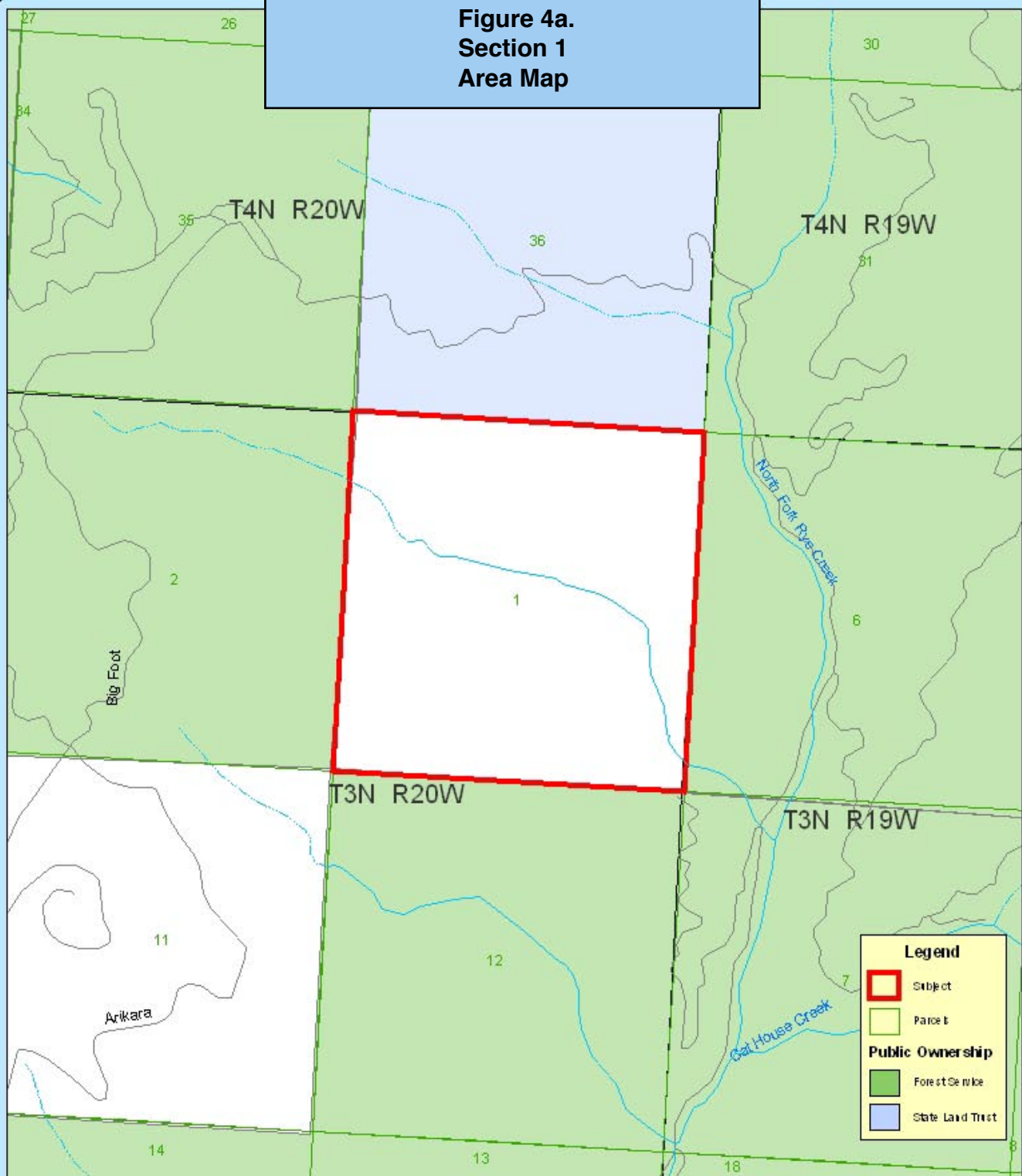
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&  
Associates  
Bozeman, Montana



**Figure 4a.  
Section 1  
Area Map**



0 0.5 1 Miles

**SCALE**

1:24,000

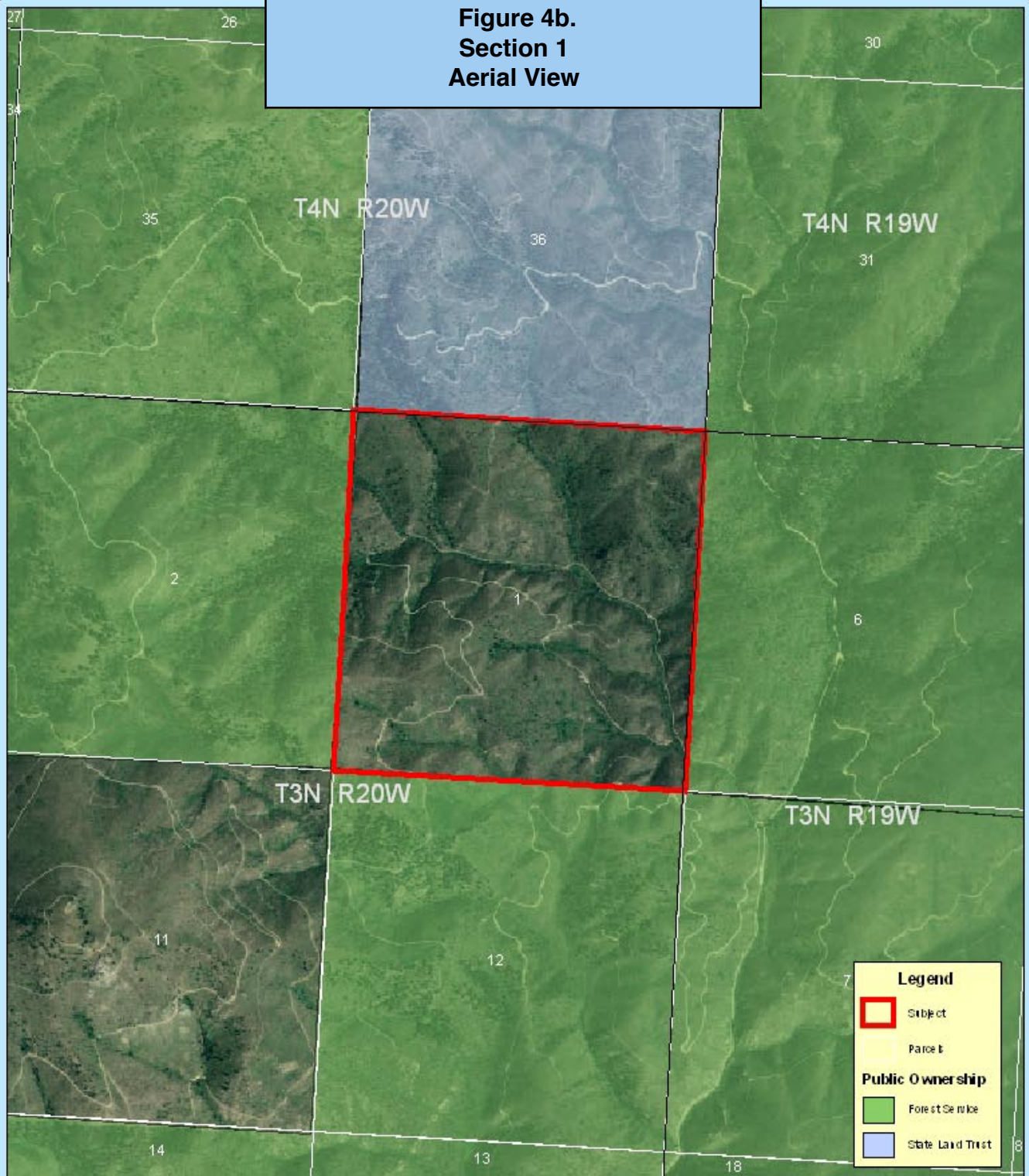
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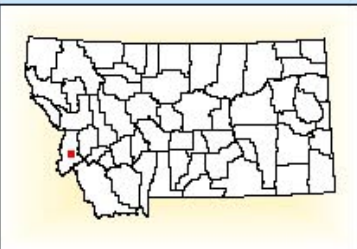
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**Figure 4b.  
Section 1  
Aerial View**



**Legend**

- Subject
- Parcel
- Public Ownership**
  - Forest Service
  - State Land Trust



0 0.5 1 Miles

**SCALE**

1:24,000

1 inch equals 0.4 miles

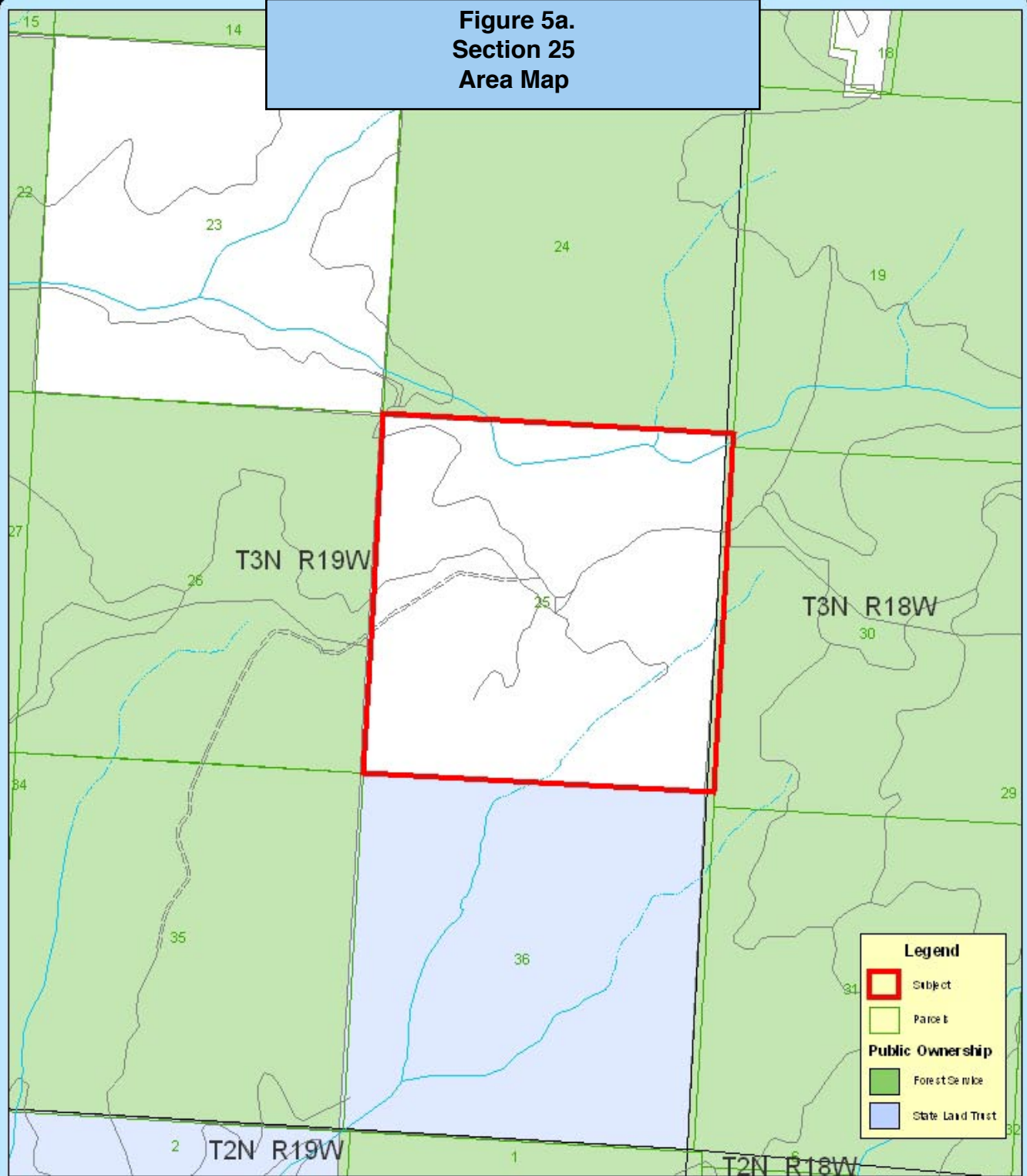
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**Figure 5a.  
Section 25  
Area Map**



0 0.5 1 Miles

SCALE

1:24,000

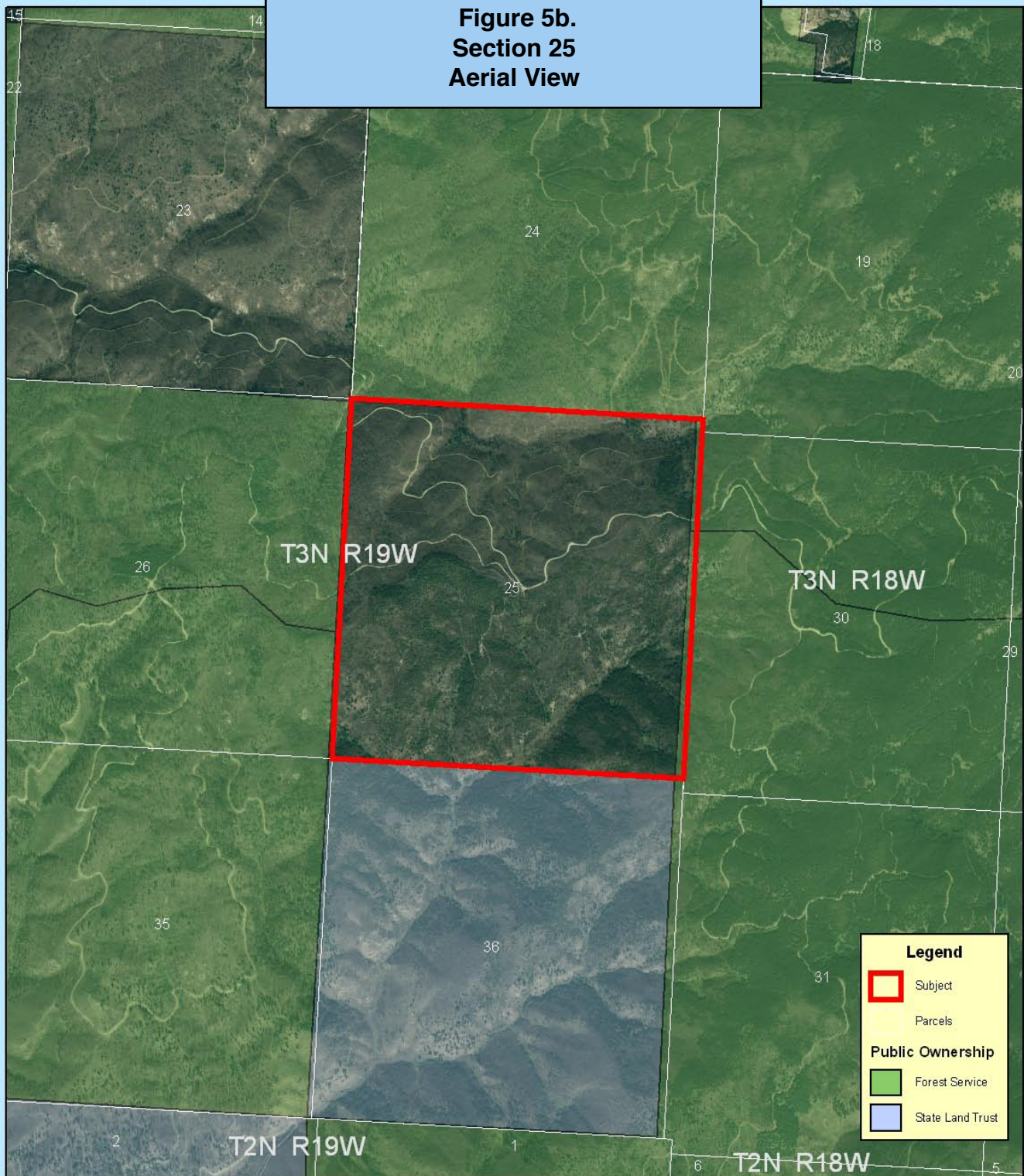
1 inch equals 0.4 miles

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&  
Associates  
Bozeman, Montana

**Figure 5b.  
Section 25  
Aerial View**

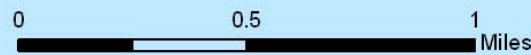
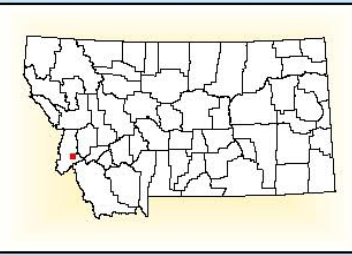


**Legend**

- Subject
- Parcels

**Public Ownership**

- Forest Service
- State Land Trust



**SCALE**  
1:24,000  
1 inch equals 0.4 miles

MAP IS INTENDED TO SERVE AS A VISUAL GUIDE  
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Norman C. Wheeler  
&  
Associates  
Bozeman, Montana



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## CHAPTER 3 – AFFECTED ENVIRONMENT AND EFFECTS

### 3.0 INTRODUCTION

This chapter provides information regarding the existing condition of the resources within the CB Ranch – DNRC Rye Creek Land Exchange proposal project area that may be affected by implementation of the three alternatives, and the potential effects to those resources. It also presents the scientific and analytic basis for the comparison of alternatives presented in Chapter 2.

The chapter begins with a discussion of the legal and regulatory framework pertinent to the analysis. Resource conditions are then described for the resources associated with the key issues identified in Section 1.6 and other resources. Following each resource description is a discussion of the potential effects associated with implementation of the alternatives. The analysis focuses on the key effects, and describes other effects briefly.

The chapter ends with information regarding consistency with other policy and direction, negative declaration, agencies or individuals contacted, and references.

### 3.1 LEGAL AND REGULATORY FRAMEWORK

Montana's Constitution and Enabling Act of 1889 require that Trust Lands be managed to provide revenue in support of the school trust and other beneficiaries of the Trust Lands. Under the administrative direction of 77-1-301, Montana Code Annotated, the DNRC manages the surface and mineral resources for the benefit of common school and other endowed institutions in Montana, under the direction of the State Land Board.

The proposed exchange would provide for a nearly eight-fold increase in available timberland (Alternative A). Productivity and

site conditions are superior on the proposed CB Ranch tradelands, with both sections being considered productive timber producing land. The State section 36 is a drier, steep site with limited timber production potential and no practical access. Extant timber and cruise results bear this out: with approximately 160 acres in forestland containing less than 1 million board feet, despite the stand age.

### 3.2 REASONABLY FORESEEABLE ACTIVITIES

If the land exchange were not completed (Alternative B), the State Section 36 would continue to be managed by the DNRC Hamilton Unit and governing laws and regulations. The grazing permit would continue, generating approximately \$196.00 per year. CB Ranch could approach DNRC in the future with an offer to purchase Section 36.

As discussed in Chapter 1, Section 1.3, if the exchange were not completed, it is likely that the isolated Rye Creek properties owned by CB Ranch would be sold or exchanged to the Bitterroot National Forest. If the parcels remained in private ownership, they would likely be grazed by recreational stock (horses) season long, potentially without managed grazing systems.

During conversations with the local community and Rocky Mountain Elk Foundation, CB Ranch representatives have indicated their intentions to place portions of their property in the Rye Creek drainage in conservation easements. By Deed of Conservation Easement filed on December 27, 2004, CB Ranch states that they have no current intentions of developing the Rye Creek property should the exchange go forward and will probably put a conservation easement on the acquired property that would prohibit development.

While CB Ranch would have full discretion on what they could do with the property should the land exchange be completed, any future uses would occur within the constraints of applicable laws and regulations.

If the land exchange were completed, the laws, rules, and regulations governing State Trust Lands would guide DNRC management of the Rye Creek tracts.

As disclosed in Sections 1.4 and 1.6, the mineral estate associated with section 25 is intact while Section 1 is severed. However, mineral development by the holders of the outstanding interest is unlikely due to the small size and limited value of any potential recoverable minerals (refer to Section 3.3.5, *Mineral Potential*).

Non-motorized recreation activities would continue to occur within the Rye Creek area.

Over the past two decades, the upper Bitterroot Valley and Rye Creek drainage have seen increased residential development (Ravalli County Comprehensive Plan). This trend is expected to continue. Numerous realtor brochures describe a number of near-by ranches as being for sale (Iten Realty brochure). However, conservation easements designed to protect open space, wildlife and fisheries habitat are also becoming more prevalent in the Bitterroot Valley.

### 3.3 RESOURCES

The information presented in this section begins with disclosing the existing condition and potential effects of the alternatives as described by the key issues identified in Chapter 1, Section 1.6. We then disclose information regarding other resources.

Commercial timber production has long been the dominant economic use of the Rye Creek lands. Under Darby Lumber Company ownership and management, these

lands were heavily logged and roaded. Much of the area burned in the fires of 2000 with significant restoration efforts and successful regeneration of seedlings since then. Section 25 has a significant stand of lodgepole pine and Douglas fir established and surviving the Sleeping Child Fire of 1961. Section 1 was severely burned and is at an early seral stage of development. State section 36 has limited timber on approximately 160 acres, with approximately 20 acres burned in the fires of 2000 and 2005. Most of the remaining area is steep hillside with perennial grasses and some shrub development in the draws.

Both the CB Ranch sections and the State section 36 are considered outstanding wildlife habitat. Elk and mule deer winter range are most important. The higher elevation, forest sections 1 and 25 are generally better habitat for a wider array of game species – moose, deer, elk, bear, mountain lion, etc (John Vore, pers com).

Domestic livestock currently graze the National Forest System lands surrounding the Rye Creek tracts, under managed grazing systems that include utilization thresholds. Grazing has been reduced following the fires of 2000. Deer and elk utilization seems to have increased following the fires. Domestic livestock grazing, as currently managed on the State Trust Lands and adjacent Bitterroot National Forest, is not degrading the resources.

#### 3.3.1 Rye Creek Drainage

Information regarding trends and conditions in Rye Creek and the local economy of the upper Bitterroot Valley is contained in the Appraisal Report (Neibergs 2006; on file at SWLO). The discussion presented here is limited to disclosing the existing condition of the Rye Creek drainage and the potential effects of the exchange alternatives.

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***Existing Condition***

The Rye Creek area offers a variety of recreational opportunities and is relatively popular for all manner of outdoor activities. Established use is heavy, and access is generally good. Primary activities within the area include hunting, fishing, firewood gathering, camping, and hiking. Rye Creek and its tributaries are not passable by boat. The scenic quality is rated as substantial and the aesthetics ratings for the stream range from average in the lower reaches to above average in the upper reaches.

Approximately one-third of the Rye Creek drainage has been privately owned and managed for decades as commercial timberlands. These alternating sections of private timberlands were extensively roaded and cut during the 1980's and 1990's. Much of the Rye Creek drainage was burned in the 2000 fires. This in conjunction with the prior industrial logging, results in extensive forest replacement and early seral forest development across much of the area. There remain patches of unburned forest and some patches of mature timber, primarily on Forest Service lands in the drainage.

***Effects***

Implementation of either Alternative A or C, resulting in changed ownership on the tracts, would result in the acquired CB Ranch tracts being managed as timberland under DNRC's Trust Lands Division, and as such, subdivision or development of home sites would be unlikely. Management would encourage restoration of multi species forests and sustainable harvest. The scenic quality would remain substantial and aesthetics would remain average and above average.

If Alternative B (no action) were implemented, the CB Ranch tracts would likely be sold or traded, potentially to the Bitterroot National Forest.

**3.3.2 Existing Conditions and Wildlife Winter Range**

The information presented here focuses on the existing condition of forest land and general characteristics of each parcel. This is followed by discussion on winter range habitat within the Rye Creek drainage and the potential effects of the alternatives on wildlife displacement. Additional information regarding wildlife is contained in Section 3.3.5, *Threatened, Endangered, and Sensitive Species*.

***Existing Condition***

The State section 36 consists of steep south and west-facing hills with 2 main drainages that run to the west – Mike Creek and Gorus Gulch. The parcel is primarily open grassland with south and east-facing aspects. There is some timber on the north facing slope of Gorus Gulch – approximately 160 acres comprised of Douglas fir and some stringers of ponderosa pine along the ridgetop. The fires of 2000 burned much of the grassland and bitterbrush on the north and east side, as well as a portion of the timber in upper Gorus Gulch.

CB Ranch Section 25 is a full 640-acre section that represents an inholding within the Bitterroot National Forest, adjoining the Sula State Forest. The tract is characterized as diverse and mountainous topography. It includes steeper slopes within the drainages, sloping hillsides and basins near a prominent saddle. The property offers excellent views of the Bitterroot Range and hills above the south side of Rye Creek. The headwaters of Rye Creek flow through the property. It is largely dominated by early successional lodgepole pine. Aside from roads, there are no improvements or structures on this section.

CB Ranch Section 1 is also a full 640-acre section that is an inholding within the Bitterroot National Forest with one contiguous section of State Land to the

north. It is located immediately west of the North Fork of Rye Creek and northeast of the Deer Mountain Lookout. Topography includes rolling hills with multiple drainages: mostly south facing on the north end and east facing along the south end of the main drainage. Views are more limited but the main drainage provides good local aesthetics and habitat. The section is primarily comprised of timberland that was burned during the fires of 2000. The regeneration of primarily lodgepole and some Douglas fir provide a mosaic of green forest among the burned snags. Aside from roads, there are no improvements or structures on this section.

### ***Effects***

Based on the review of the CB Ranch sections 1 and 25 and State Section 36, implementation of the exchange – either under Alternative A or C – would be beneficial to wildlife because both alternatives would consolidate habitat in the Rye Creek drainage into public ownership. All of the parcels considered for exchange are considered important winter range for elk and mule deer. None of the exchange tracts are considered critical habitat as outlined in any Endangered Species Recovery Plan. It is also important to consider the location of the CB Ranch exchange sections. Each is surrounded by State and Bitterroot National Forest land and poses the concern of fragmentation within uninterrupted habitat. The change of ownership proposed under Alternatives A and C would result in no displacement of wildlife, particularly elk, from important big game winter range. Under Alternative B (no action), big game habitat in the Rye Creek drainage would not be consolidated into public ownership and the habitat could remain susceptible to fragmentation. Any development associated with Alternative B would result in displacement of elk and mule deer from important big game winter range and fragmentation of their habitat.

The CB Ranch lands surrounding the State Section 36 are protected by a conservation easement held by the Rocky Mountain Elk Foundation. While not a condition of proposal, this easement would be amended to include the addition of the State Section 36 upon conveyance to CB Ranch.

### **3.3.3 Legal Access to Exchange Lands**

The information presented here focuses on the existing status and condition of access to Rye Creek Sections 1 and 25 and the lack of access to State section 36. Additional information regarding recreation/access is contained in Section 3.3.5, *Roads/Access*.

### ***Existing Condition***

Currently, DNRC does not have legal access to Section 36 (see Figures 3a and 3b in Chapter 2). In contrast, the CB Ranch Sections 1 and 25 have good access via Forest Service system roads No. 75 and No. 321. These roads are designated on the Bitterroot National Forest Map as open year long to motorized vehicle use.

### **3.3.4 Potential Cumulative Effects**

A cumulative effect is the impact on the environment, which results from the incremental effect of the action when added to other past, present, and reasonably foreseeable actions. The existing condition descriptions in Sections 3.3.1 through 3.3.3 include past and present activities. Reasonably foreseeable activities are listed in Section 3.2. The cumulative effects to the resources are described in the context of the reasonably foreseeable activities.

The cumulative effects of Alternative A (the proposal) when combined with the reasonably foreseeable activities are positive because the CB Ranch Section 1 and 25 would be protected from potential subdivision and private development. In addition they would be included in the State



Trust Land inventory and managed in a manner more consistent with surrounding public lands. These parcels would be actively managed for timber production and the associated benefits of sustainably managed forestland.

CB Ranch has indicated that State section 36 would be managed as wildlife habitat, consistent with the rest of the ranch and proposed for protection under a conservation easement with the Rocky Mountain Elk Foundation.

In summary, land ownership would be consolidated, and the best interest of the public would be served.

The cumulative effects of Alternative B (no action) when combined with the reasonably foreseeable activities are negative because of the potential that the isolated CB Ranch parcels could be sold and become available for private recreational development, thereby create a fragmentation of public land and important wildlife habitat. This would result in land ownership not being consolidated, and the best interest of the public not served.

### 3.3.5 Additional Resources

#### *Threatened, Endangered and Sensitive Species*

A fisheries assessment was included in the Natural Heritage Program query, in addition to consultation with the local State fisheries biologist. There are no threatened, endangered, or sensitive fish contained within the specific private and state sections of land in the exchange. However these ephemeral streams feed to Rye Creek, Cameron Creek, and the Bitterroot River, and can be a potential source of stream-clogging sediment and undesirable runoff. Upper tributaries of Rye Creek below the CB Ranch sections do support westslope cutthroat trout and may present future

opportunities for spawning and rearing habitat for bull trout.

Western toads along Rye Creek would not be affected by the proposed exchange or by ongoing activities in the area. The State section 36 is an upland site with limited and ephemeral flows in Gorus Gulch (and no fish). Chris Clancy, local fisheries biologist for MDFWP, found no concerns with the proposed land exchange. Clancy, along with the Bitter Root Chapter of Trout Unlimited have expressed support the proposed exchange. The restoration of forest and appropriate management of weeds and roads in the Rye Creek drainage would be beneficial to stream conditions, water quality and overall fish habitat (Clancy, pers comm., D. Nation, pers comm.).

Neither the CB Ranch nor State proposed exchange tracts are Critical Habitat as outlined in any Federally Endangered Species Recovery Plan. Grizzly bears may potentially pass through the tract, with the closest documented occurrence being over 20 miles away in the Rock Creek drainage. Wolves are present and move through all of the Rye Creek drainage and southern Sapphire Mountains. They are typically associated with the large herds of elk and deer that occur on the CB Ranch and adjacent public lands.

By definition, the Rye Creek tracts would be classified as Canada lynx habitat, but due to its isolated nature, it would serve only as a travel area. There are no understory shrubs within the forested area for foraging and very little downfall for denning. No concerns were identified that would contribute to risk factors affecting threatened or endangered species. Sage grouse, Columbian sharp-tailed grouse, pine marten, and northern goshawk are sensitive species considered for this analysis. No concerns were identified that would contribute to risk factors affecting these sensitive species.

Previous field surveys and a review of MTNHP databases revealed no occurrences of rare plants on the exchange parcels. A summary report on vegetative communities and rare plants is attached as Appendix A.

### ***Mineral Potential***

As disclosed in the Report of Mineral Potential contained in the project file, the entire Rye Creek drainage has a rating of Low Potential (L) for locatable mineral resources, oil and gas and other leasable minerals, and salable minerals, based on a Geologic Assessment and Remoteness Survey completed by the Bitterroot National Forest (BRNF 1998).

Due to the low mineral potential of the Rye Creek drainage and surrounding area, no mineral development or production is foreseen for either the CB Ranch Sections 1 and 25 or State section 36.

Completion of the proposed land exchange would result in transfer of mineral rights from the State to CB Ranch along with the surface ownership of Section 36.

Completion of the proposed land exchange would result in mineral rights on Section 25 of CB Ranch passing to the State, along with surface ownership. No mineral rights would be included with the conveyance of CB Ranch Section 1. As disclosed in the Report of Mineral Potential, there are no identified minerals of economic significant and only a remotely small risk of any future attempt to develop the mineral potential by the holders of the outstanding interest. Any future mineral development would have to comply with State law.

### ***Cultural Resources***

A cultural resource survey has been completed and is contained in the project file. Examination of both the CB Ranch and State tracts by Western Cultural revealed no cultural resources (Knudsen and Gibbons 2005). No indication of any Traditional

Cultural Property was received from the Tribes contacted during the analysis. Therefore, cultural resources on State lands would not be affected by the proposed land exchange. The DNRC staff Archeologist has received, reviewed and approved the completed cultural resource assessment.

### ***Roads/Access***

As disclosed in Section 3.3.3, the State section 36 has no legal access. The property is most directly accessed by crossing the private Darby Bridge to a private gravel road east of Darby on the east side of the Bitterroot River. Travel north approximately 3 miles along the Bitterroot River and take a narrow road/trail in an easterly direction about 1,000 yards to the edge of the State section in the Mike Creek drainage. Another primitive road/trail road further north goes up and into the State section through Gorus Gulch. This crosses a third party ownership and is not a legal access for the CB Ranch.

CB Ranch Section 25 is due north of the Sula State Forest, approximately 15 miles southeast of Darby. Access is good and can be had via the Rye Creek Road (Forest Service Road No. 75). This is an improved public road and is one of the primary routes within the drainage. FS Road 75 enters Section 25 in the northwest corner and crosses the northern half of the section. There are several roads that come off FS Rd 75 in the middle of the Section, including FS Rd 369. There are a series of private roads and trails that were constructed during the historic logging activity.

CB Ranch Section 1 has good access and is most directly accessed by the Rye Creek Road and connecting with the North Fork of Rye Creek Road (FS Road 321) for about 4 miles. This enters the southeast corner of Section 1 with a series of roads within the section that provides access throughout Section 1.

***Timber Resources***

A timber cruise was completed by Mr. Robert Hayes and reviewed and approved by DNRC staff (Bob Storer and Paul Moore). State Section 36 contains approximately 910,000 board feet of timber on about 160 acres. The timber is comprised of mostly Douglas fir with some ponderosa pine. A few individuals of large diameter pine were found near the ridgetop. The timberland is restricted primarily to the steep north-facing slopes above Gorus Gulch. Some timber on the upper, east side was burned during the fires of 2000. With consideration for 2MBF residual per acre with this timbered area, there is 640,000 board feet of harvestable timber. Access remains problematic and haul distance to the mill significantly undermine values on this timber.

The CB Ranch Sections 1 and 25 were not cruised for commercial timber. Section 25 had previously been harvested and the northern half was burned during the fires of 2000. Land to the south of FS Road 369 is mostly unburned lodgepole pine, most of it in an early seral stage. A more detailed description of the vegetative communities for the subject properties is contained in Appendix A.

If the land exchange were completed under Alternatives A or C, an estimated 160 acres of marginal and inaccessible timberland would transfer to CB Ranch. Timber management on this site is proposed for stand thinning within the Douglas fir to benefit wildlife habitat and reduce fuel loading.

If the land exchange is not completed, timber harvest would likely not occur on State section 36. Also, the State would not receive up to 2 sections of productive timberland with good access.

***Ravalli County Tax Base***

In 2005, the real property taxes for the CB Ranch sections were assessed as part of the

overall ranch. Timberlands without improvements are taxed at approximately \$1.00 per acre or about \$1,300.00 for both sections.

State section 36 is not in the county tax base. The current grazing fees paid on the state grazing lease by CB Ranch to DNRC is for 46 AUM for a total of \$197.

The estimated tax on real property for the two exchange tracts is based on basic land values, not the possible future value of any residential development that might take place on the private lands.

If the land exchange is completed, the real property taxes assessed on the state section 36 would be about \$620. There would no longer be a tax assessment on the CB Ranch Sections 1 and 25. There would be a net decrease in the tax base of the county of about \$620. The actual amount would depend on the county assessment for the whole of the CB Ranch and annual tax rates.

If the land exchange is not completed, the county tax base would not be affected

***Administrative Costs***

If the land exchange is completed as proposed (Alternative A or C), the State Section 36 grazing permit would be cancelled and the DNRC allotment would be closed. This would reduce DNRC range administration costs by some small measure.

The addition of the CB Ranch timberland parcels into DNRC administration would not cause significant increases in administration due to their relative size and location, compared to the entire Sula State Forest.

If the land exchange is not completed (Alternative B), there would be no change in costs for grazing permit administration, and no change in costs for land line posting (boundaries are currently surveyed and posted).

***Land Appraisal***

The fee simple interest of the private CB Ranch land (Sections 1 and 25) and the State land (Section 36) were appraised, subject to existing easements, encroachments, and reservations of record. The date of estimated market value is October 22, 2006. The appraisal was completed in accordance with DNRC standards and policies by certified appraiser Paraic Neibergs of Missoula (Neibergs 2006). Mr. Neibergs is a Montana Certified General Appraiser (#248). The appraisal report has been accepted, reviewed and approved by DNRC staff appraiser Tom Konency (December 2006). Both the report and review are on file at SWLO.

The CB Ranch Sections were valued at \$992,000 each for a total of \$1,984,000. The State section 36 was valued at \$1,088,000 with a discount applied for lack of legal access to a total value of \$688,000.

### **3.4 CONSISTENCY WITH OTHER POLICY AND DIRECTION**

#### **3.4.1 Wetlands and Riparian Areas**

Neither the CB Ranch timberlands in sections 1 and 25 nor State section 36 have classified wetlands or significant riparian habitat. All parcels are relatively steep and with limited potential for wetland development.

Gorus Gulch and Mike Creek cross section 36. Both are small with ephemeral flows and limited riparian development. CB Ranch section 1 has a small tributary to the North Fork of Rye Creek. CB Ranch section 25 has the upper reaches of Rye Creek draining the northern fringe of the property. The southeastern corner of this section drains to the headwaters of the North Fork of Cameron Creek. Both of these streams are seasonally ephemeral with limited riparian development.

No effects would occur on the limited riparian areas from the proposed exchange or the no action alternative.

#### **3.4.2 Other**

During the mid-late 1990's there was considerable discussion over the future of the Rye Creek timberlands – principally the former Darby Lumber Co lands that were being offered for sale. During meetings with and among interested parties and user groups, the Trust for Public Land and Bitterroot National Forest identified several key issues as they approached a congressionally sponsored purchase of Darby Lumber lands. These issues focused on reducing the threat and likelihood of inappropriate development and subdivision of timberlands and wildlife habitat. The area was identified as critical wildlife habitat – especially as winter range for large herds of elk and mule deer.

Public access was also viewed as important – both to the former Darby Lumber lands, as well as the intermingled State and Forest Service lands surrounding them. Fisheries advocates stressed the importance of forest restoration and road maintenance in order to reduce and eliminate the harmful siltation of Rye Creek and other spawning tributaries to the upper Bitterroot River. Overall improvement of water quality in the tributaries and upper Bitterroot River was also viewed as a beneficial outcome of the land consolidation.

Under Alternative B – no action, the CB Ranch sections 1 and 25 would potentially not be open to continued public access and recreation. Forest regeneration and restoration would continue but not with the guidance and skill that professional foresters from DNRC's local Hamilton Field Office would provide.

Alternatives A and C are also consistent with the Ravalli County Comprehensive Plan, which includes an objective to "Promote opportunities for public/private



land exchanges which will secure high-value recreational resources for public use.”

Alternatives A and C fit well with the Ravalli County Comprehensive Plan’s land use goals. The section 36 parcel would remain essentially the same under private ownership by CB Ranch as under State DNRC management. Elk and wildlife grazing would replace allotted cattle grazing, as has been the case since 2004.

Alternative B would not take advantage of the opportunity to secure high-value recreational resources, and therefore would not be consistent with the Ravalli County Comprehensive Plan.

### 3.5 NEGATIVE DECLARATION

The three alternatives would not have an adverse impact on the following: Federal or State designated areas (Wilderness, Parks or other), inventoried roadless areas, research natural areas, Native American religious or cultural sites, archeological sites, or historic properties, prime farmland rangeland and forest land, steep slopes or highly erosive soils, caves, grazing permit rights, water rights, or water and air quality. There would be no disproportionate impact to consumers, civil rights, minority groups or women. A hazardous materials survey was completed and there are no known hazardous materials on either site.

### 3.6 AGENCIES OR PERSONS CONTACTED

The following agency staff and specialists were contacted and consulted during the preparation of this environmental assessment:

#### **Wildlife and Fisheries:**

*MT Fish, Wildlife and Parks:* Chris Clancy, John Vore, John Firebaugh  
*Bitterroot National Forest:* John Ormiston

*MT Natural Heritage Program:* Paul Hendricks

*Trout Unlimited:* Doug Nation, Bruce Farling

*DNRC:* Mike McGrath

#### **Vegetation:**

*Private Consultants:* Jack Losensky, Peter Lesica, Bob Hayes

*USFS Region 1:* Steve Shelley

#### **Archaeology/Cultural:**

*Bitterroot National Forest:* Mary Williams

*Private Consultants:* Dan Hall, Richard Gibbons, Susan Knudsen

*DNRC:* Patrick Rennie

#### **Forestry/Lands:**

*Bitterroot National Forest:* Roylene Gaul

*Private Consultants:* Jack Losensky, Vito Sonny LaSalle

*DNRC:* Paul Moore, Bob Storer, Liz Mullins, Candace Durran, Tom Konency

#### **Other agencies and officials contacted include:**

- Ravalli County Commissioners
- Montana Department of Fish, Wildlife and Parks
- Montana Department of Natural Resources and Conservation
- Montana State Historic Preservation Office
- Office of the Governor
- Offices of Sen. Max Baucus and Sen. Conrad Burns (ret)
- State Legislators: Sen. Rick Laible; Sen. Jim Shockley; Rep. Ron Stoker.

- Montana Natural Heritage Program

**Interested Organizations and Groups contacted include:**

- Trout Unlimited – Bitter Root Chapter and State Council
- Ravalli Fish and Wildlife Association
- Montana Wildlife Federation
- Rocky Mountain Elk Foundation
- Audubon – State Council and Bitterroot Chapter
- Bitter Root Land Trust
- Five Valleys Land Trust
- The Nature Conservancy
- The Trust for Public Land
- Friends of the Bitterroot
- American Bird Conservancy
- Bitterroot Crosscountry Ski Club
- Bitterrooters for Multiple Use
- League of Women's Voters
- National Forest Foundation
- Montana Environmental Information Center

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# Montana Species of Concern Land Exchange DNRC and CB Ranch

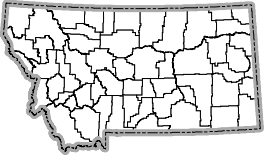
## Species of Concern

- Vascular Plant
- Nonvascular Plant
- Other Botanical
- Vertebrate Animal
- Invertebrate Animal
- Other Zoological
- Animal Inferred Extent
- Ecological Sites

**SPECIES OF CONCERN:** A polygon feature representing only what is known from direct observation with a defined level of certainty regarding the spatial location of the feature.

**INFERRED EXTENT:** Areas that can be inferred to be probable occupied habitat based on the spatial location of the direct observation of a species and general information available for the foraging area and home range size of the species.

**SITES:** Ecological information that may be useful in assessing biological values and interpreting Species of Concern data.



## Land Management

- US Bureau of Land Management
- US Bureau of Reclamation
- US Fish and Wildlife Service
- National Park Service
- US Forest Service
- Other USDA
- Army Corps of Engineers
- Other Department of Defense
- Undifferentiated state
- DNRC (state trust lands)
- Montana Fish, Wildlife & Parks
- University, Institutions, MDT
- DNRC (water project lands)
- Local Government
- Bureau of Indian Affairs Trust
- Tribal Lands
- Plum Creek
- Private Land Trusts

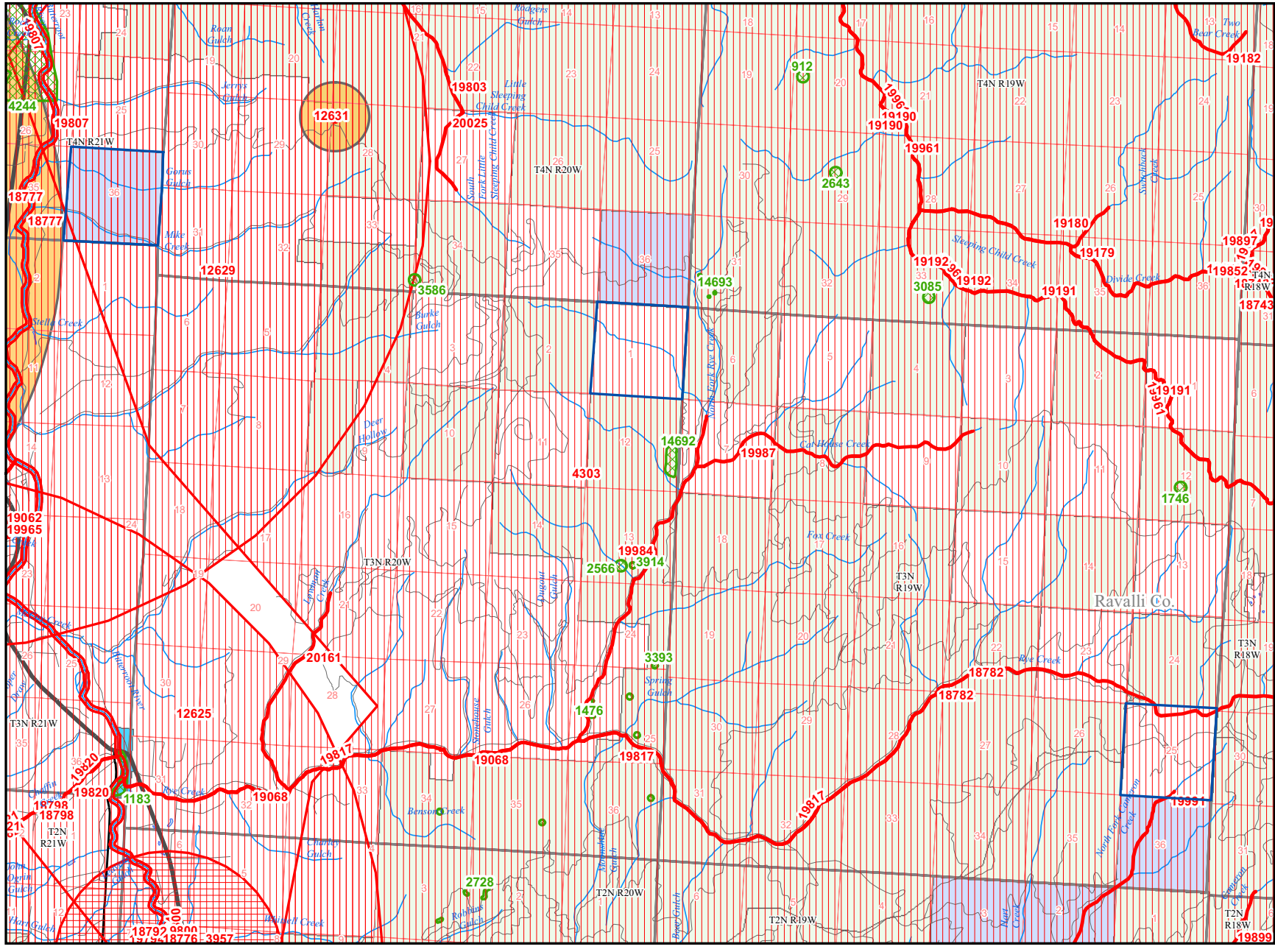
Not all legend items may occur on the map.

Features shown on this map do not imply public access to any lands.

This map displays management status, which may vary from ownership.



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## APPENDIX A: AN ASSESSMENT OF RARE PLANTS AND PLANT COMMUNITIES OF THE EXCHANGE LANDS

### FORESTED PLANT COMMUNITIES

#### **CB Ranch land**

The private exchange land is composed of two sections located in the tributaries of the Bitterroot River. Section 1 in T3N, R20W is drained by a branch of the North Fork Rye Creek, which joins Rye Creek and eventually joins the Bitterroot River south of Darby, Montana. The extreme northern portion of Section 25 in T3N, R19W is also drained by Rye Creek. The drainage for the majority of the section however flows into the North Fork of Cameron Creek, which enters the East Fork of the Bitterroot River near the junction of Highway 93 and the East Fork Road (FS Road No. 472). Slopes are moderate to steep with about 70 percent facing in a northerly aspect and the remainder facing to the south. Elevations range from a low of about 5175 feet along North Fork Rye Creek to an upper elevation of 6425 feet on the ridge between North Fork Cameron Creek and Rye Creek.

#### **DNRC land**

The state exchange land is section 36 in T4N, R21W. The section is drained by Dick and Gorus Gulches and Mike Creek. These are short drainages that flow directly into the Bitterroot River about two miles north of Darby, Montana. Slopes are steep and typically face north or south however there is an area of westerly slopes that represent the foothill face east of the Bitterroot River. Elevations range from 3925 feet in Mike Creek to 5250 feet on the ridgeline between Dick Gulch and Gorus Gulch.

#### **Vegetation Potential**

The climate is influenced by weather systems moving eastward from the Pacific Ocean however by the time they reach the project area they have lost most of their moisture and site conditions tend to be relatively dry. The last occurrence of species associated with the Pacific maritime climate are found in the Westside canyons west of the Bitterroot River and species composition in the study area is more associated with the Continental climate found to the east of the area. Consequently both understory and overstory vegetation is less diverse than found to the north and west of the study area.

The following vegetation classification was taken from Bitterroot Fires 2000: an assessment of post-fire conditions and recovery recommendations and adapted to conditions found in the study area. These units are referred to as vegetative response units or VRU's. This classification provides a framework based on climatic, geophysical, soil factors and habitat types to assess vegetative potential of the various sites as well as natural processes. Based on this information future vegetative conditions can be predicted.



VRU1 – Grasslands - These sites are dominated by grasses including bluebunch wheatgrass (*Pseudoroegneria spicata*), rough fescue (*Festuca scabrella*), Idaho fescue (*Festuca idahoensis*), elk sedge (*Carex geyeri*) and pinegrass (*Calamagrostis rubescens*). Lesser amounts of bluegrass (*Poa spp.*), June grass (*Koeleria cristata*) and forbs such as balsamorhiza (*Balsamorhiza sagittata*) and heartleaf arnica (*Arnica cordifolia*) are also common. Minor amounts of big sagebrush (*Artemisia tridentata*) and bitterbrush (*Purshia tridentata*) may be present in section 36. Fires were common probably occurring every 5 to 15 years. Typically they occurred after the grasses became dormant in mid July and had minimal impact on vegetative structure.

VRU 2 – Warm, dry ponderosa pine (*Pinus ponderosa*) and Douglas-fir (*Pseudotsuga menziesii*) habitat types. Douglas-fir/pinegrass, Douglas-fir/snowberry and Douglas-fir/ninebark are the most common habitat types on these sites with some very dry sites containing bluebunch wheatgrass. Understories are dominated by pinegrass, snowberry (*Symphoricarpos albus*), ninebark (*Physocarpus malvaceus*), spiraea (*Spiraea betulifolia*), serviceberry (*Amelanchier alnifolia*), rose (*Rosa spp.*) and elk sedge and the overstory is made up of ponderosa pine and Douglas-fir. Sites are low to moderate in productivity and vegetation is moderately diverse. Historically almost 60 percent of the stands were composed of old open grown trees maintained by frequent underburns. Ponderosa pine was the major species along with some Douglas-fir. Stands less than 40 years of age represented about 15 percent of the area. The fires were typically non-lethal and occurred every 10-25 years in this area. Fuel loadings were generally light. Stands were typically uneven aged being made up of small even-aged groups from a few trees to tens of acres in size. Infrequent mixed or stand replacement fires may have occurred every 50-300 years. Regeneration could take an extended period of time following a high intensity fire event resulting in a shrub-dominated community for up to 50 years.

VRU3 – Cool, dry, and moist Douglas-fir habitat types. Probably the most common habitat type found in this group in the study area was Douglas-fir/huckleberry along with the cooler phases of Douglas-fir/ninebark and Douglas-fir/snowberry. The cool, dry portion of the Douglas-fir/pinegrass was also common. Understories tend to be shrubby composed of huckleberry (*Vaccinium globulare*), snowberry, ninebark, kinnikinnick (*Arctostaphylos uva-ursi*), or on the cooler and drier portions, grasses including pinegrass, elk sedge or bluebunch wheatgrass. Douglas-fir is the dominant overstory tree along with some ponderosa pine and lodgepole pine scattered through the upper elevations of the type. Historically these stands were generally somewhat open and dominated by mid aged trees. They had what could be called a “messy” appearance with a variety of age classes and numerous dead snags remaining from the last burn. Fuel loadings could become moderately heavy as a result of the moister conditions and longer fire free period. Patch size varied from a few acres to a few hundred acres. Typically about 60 percent of the stands were in a pole or mature age class with an additional 20 percent less than 40 years of age. Overmature stands accounted for only a little over 5 percent of the area. Typically fires were a mixed intensity occurring about every 35-60 years. Infrequently a stand replacement fire may have occurred when fuel buildups and weather conditions were favorable. Sites are moderately productive and regeneration generally occurred within 20 years on all but the dry grass types following a disturbance.

VRU 4 – Cool lodgepole pine and lower subalpine fir habitat types. In the study area the most prominent habitat type in this group is subalpine fir/beargrass with lesser amounts of subalpine fir/menziesia and subalpine fir/bedstraw. The major overstory species is lodgepole pine with some Douglas-fir. Understory vegetation consists of beargrass (*Xerophyllum tenax*), blue huckleberry, menziesia (*Menziesia ferruginea*), grouse whortleberry (*Vaccinium scoparium*), and mountain arnica (*Arnica latifolia*). Historically these sites were very diverse in age and patch size, however, old growth stands were limited. Periodic mixed and stand replacement fires resulted in a high percentage of young stands with scattered small patches of trees that escaped the last fire. Fuel loadings were highly variable from lodgepole pine stands with clean understories as a result of a double burn to fuel loadings in excess of 100 tons per acre following an outbreak of mountain pine beetles. Patch size varied from a few acres to hundreds of acres. In excess of 40 percent of the stands were less than 40 years of age while less than 5 percent reached the overmature category. A mixed fire event may occur every 75 years and a stand replacement fire every 150 years. Site productivity is moderate to high and with lodgepole pine common on the site; regeneration is well established with 5 years following a fire.

#### Riparian

The riparian areas found in the study area generally fall in the VRU4 group although understory vegetation may be slightly different. Overstories are made up of a variety of tree species including Douglas-fir, subalpine fir, Engelmann spruce, with an occasional black cottonwood (*Populus trichocarpa*). Common understory plants are huckleberry and menziesia along with red osier dogwood (*Cornus stolonifera*), mountain maple (*Acer glabrum*), alder (*Alnus spp.*), twinflower (*Linnaea borealis*), and a variety of moisture loving forbs. Historic stands generally were a dense mixture of the above-mentioned trees. Typically 80 percent of the type contained mature or overmature trees and less than 5 percent was less than 40 years of age. Patch size was controlled by the size of the riparian site adjacent to the stream resulting in linear strips less than 100 acres. The site normally experienced a long fire free period of about 200 years. Fires tended to be mixed or stand replacement in intensity although underburns were common when fires from the adjacent slopes crept into them when moisture conditions were too high for the site to burn at a high intensity.

#### Threatened and Endangered Plant Species

There are three plant species listed as threatened or proposed threatened in Montana under the federal Endangered Species Act. Ute ladies'-tresses (*Spiranthes dihuviensis*) is found in meandered wetlands and swales in broad, open valleys, at margins with calcareous carbonate accumulation (MTNHP 2007b). There are no known occurrences in Ravalli County.

Water howellia (*Howellia aquatilis*) is found in small vernal wetlands with firmly consolidated bottoms and include shallow, low-elevation glacial pothole ponds and former river oxbows with margins of deciduous trees and shrubs. It has been found in

Lake and Missoula counties but there are no known occurrences in Ravalli County (MTNHP 2007b).

Spalding campion's (*Silene spaldingii*) is a proposed threatened plant found in open, mesic grasslands in the valleys and foothills in association with rough fescue, Richardson's needlegrass (*Stipa richardsonii*) and Idaho fescue. It has been found in Flathead, Lake, Lincoln and Sanders counties but there are no known occurrences in Ravalli County (MTNHP 2007b).

### Sensitive Plant Species

A review of the Montana National Heritage Program found 49 plant species of concern in their database for Ravalli County. In addition the Bitterroot National Forest listed 5 additional species that they considered sensitive within the forest (see Appendix B for a complete list). None of the species on either list were found in the areas under study.

Section 1 – The plant tapered-root orogenia (*Orogenia fusiformis*) is found on open slopes, ridges and meadows from the lower foothills to moderate elevations in the mountains. Two occurrences were found in the SE1/4 of section 12 in T3N, R19W and one in the SW1/4 section 31 in T4N, R19W. Both of these locations are adjacent to North Fork Rye Creek and since a branch of this stream continues into section 1 it is possible the plant may also be found there. The plant is at some risk to knapweed invasion but grazing does not appear to be detrimental. It is anticipated that with more surveys conducted early in the season when it flowers that additional populations will be found and it may eventually be removed from the list. The risk to plant loss is considered low.

Section 25 – While no known surveys have been undertaken in this section, a survey has been conducted in the adjacent sections 26 and 35 in T3N, R19W. This survey did not locate any plants on the sensitive list.

Section 36 – There have been no known surveys of this section and consequently there are no plants known to occur in the section. There is a potential for Lemhi penstemon (*Penstemon lemhiensis*) to occur here. It is a plant of open sagebrush/bunchgrass areas often near the lower treeline. Known locations in similar vegetation found in the section are located near the mouth of Rye Creek about six miles to the south and also near the forks of North Fork Rye Creek and Rye Creek which is about 7 miles southeast of the section. This species is found only in southwest Montana and adjacent Idaho. It is at risk to heavy grazing and noxious weeds such as knapweed. Drought and fire suppression may also be important constraints on maintaining viable populations. Studies have shown an increase in a population following a fire on areas without knapweed (MTNHP 2007b). The plant is considered at moderate risk to population loss.

None of the other plants of concern have been found within 5 miles of the study.

## CB Ranch land

Coniferous forests dominate the private exchange lands. Only very minor amounts of non-forest sites are found that are occupied by grasses on steep, shallow soiled southerly aspects. These are too small to map out separately. Rock outcrops account for the remainder of the non-forest type. The entire area has been heavily logged and almost all commercial volume had been removed prior to the fires of 2000. Approximately one-half of the area burned during that event causing the mortality of many of the residual trees. Following is a description of conditions within each of the private exchange parcels.

### Section 1

All aspects except westerly are represented in the section with better than 40 percent having a southerly exposure. Northern slopes represent about 30 percent of the area with easterly slopes accounting for the remainder of the area. Elevations range from 5175 to about 6280 feet. As a result of the varied exposures there is also a wide variety of plant communities found in the section. Steep, dry slopes belong to the VRU2 group with understories of low shrubs and grasses. More gentle southerly slopes, ridgelines and lower easterly aspects generally belong to the VRU3 group with Douglas-fir the primary overstory species and pinegrass on the drier sites and huckleberry on the more mesic sites the common ground cover. Most of the northern slopes and the higher elevation easterly slopes are found in the VRU4 with lodgepole pine the primary species along with some Douglas-fir. Huckleberry and beargrass are the most common understory plants. The riparian areas are also in VRU4 and scattered Engelmann spruce, Douglas-fir, subalpine fir and lodgepole pine are the principle species.

Knapweed is well established on the roads through the area and on some of the drier southerly slopes and ridgelines.

The fires of 2000 burned the entire section with about 70 percent a moderate intensity burn primarily on the southerly aspects and about 25 percent with a high intensity mainly on northerly aspects. A minor amount of the southwest corner of the section burned with a low intensity burn.

Present stand conditions reflect the impact of logging and fire with very few trees surviving the fires. Those that did are located in the riparian zone and on the open dry ridgelines.

Future conditions will reflect the consequences of heavy logging and the fire impacts. It is anticipated that the amount of ponderosa pine will be greatly reduced in the future stand while lodgepole pine will probably dominate most of the upper elevation sites. A landscape that once supported a wide variety of age and structural classes will now be dominated by uniform age and structure for the foreseeable future.



## Section 25

The general aspect of the section is either northerly or south slopes. Only a minor amount of easterly aspect is present. Elevations range from about 5750 to 6425 feet. The southerly aspects are predominantly URV3 with Douglas-fir the predominant tree and huckleberry the principle understory. Minor amounts of URV2 are found on the very steep and dry slopes with a mixture of ponderosa pine and Douglas-fir. Here understories are generally low shrubs like snowberry or pinegrass. The ridgelines frequently are dominated by a cool pinegrass community with Douglas-fir. The northerly aspects are mainly in URV4 with mixtures of lodgepole pine and Douglas-fir. Beargrass, huckleberry and menziesia are the more common understory plants.

Knapweed occurrence follows the same pattern as noted in section 1.

The fires of 2000 burned the Rye Creek portion of the section with a moderate intensity. There are very few survivors from the fire and these are found scattered in the riparian zone or on open dry ridgelines. The North Fork Cameron Creek drainage saw little impact from the fires and a relatively dense stand of sapling and pole sized overstory is present.

Future conditions will probably again be dominated by Douglas-fir on the south slopes and lodgepole pine with Douglas-fir on the north slopes. Ponderosa pine is expected to be limited in the Rye Creek drainage in the future stand, however, the unburned North Fork Cameron Creek drainage may have near normal representation. These south slopes will be much denser than the natural stand with Douglas-fir providing most of the increase. As noted in section 1 age and stand structure will be markedly different from the natural stand. Generally the section will contain two age classes with a relatively uniform density over the section.

### DNRC exchange land

The proposed state exchange land is found in section 36 of T4N, R21W. The vegetative structure is markedly different than the offered land because of the drier and warmer site conditions. Over half of the slopes are southerly in orientation and about a third having a northerly aspect. The remaining represents the face of the foothills, which border the main Bitterroot Valley. Elevations range from a low of 3975 in Mike Creek to a high of 5250 on the ridge between Dick and Gorus Gulches. South facing slopes are almost exclusively URV1 occupied by various mixtures of dry grasses such as bluebunch wheatgrass and Idaho fescue. These types represent about 60 percent of the section. Rough fescue may be found in moister environments such as draws or on more northerly exposures. Bitterbrush is also common on these sites and can dominate the vegetation. A few small areas with open ponderosa pine were noted which probably are part of the ponderosa pine/bitterbrush habitat type.

The forested portion of the section is broken into three bands located on the north facing slopes that cross the section. The slope out of Dick Gulch is dominated by ponderosa pine however this slope was burned in the fires of 2000 and consequently many of the

trees were killed. The fire covered about 15 percent of the section. The area is primarily in URV2 with ponderosa pine climax habitat types found on lower elevations while warm dry Douglas-fir types occupy the extreme eastern portion of the draw. The remaining two bands are on the north facing slope of Gorus Gulch and Mike Creek and are also occupied by URV2 with a minor amount of URV3 on the extreme edge of the section. The overstory vegetation is dominated by small dense stands of ponderosa pine and Douglas-fir. While there is no record of logging in this section, the present stand condition suggest that the original stand may have been removed at the time Darby was first settled either as firewood or for lumber.

The south slopes are well infested with knapweed and where there is sufficient sunlight it is common on the north slopes. Heavy grazing pressure in the riparian zones have converted much of the area to bluegrass dominated meadows. The lack of fire is well shown in the very dense stands found in the section. That part of the section that burned experienced a moderate intensity fire that caused heavy mortality of the mature trees on the site. As a result of fire suppression a dense understory of regeneration became established on the site resulting in the moderate intensity burn. Typically very little mortality would occur following a natural fire cycle.

The present stand conditions no longer reflect the natural structure of these types. Apparently early logging and subsequent lack of fire has permitted the development of a very dense stand of young trees that is at risk to mortality in future fires or to insect activity. The area that burned in 2000 may have some ponderosa pine recovery however Douglas-fir will probably dominate the new stand without the thinning effect of frequent low level fires.

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## APPENDIX B: PLANT SPECIES OF CONCERN FOR RAVALLI COUNTY

*Montana Natural Heritage Program*

Scientific Name	Common Name	Global Rank	State Rank	USFS
<i>Allium acuminatum</i>	tapertip onion	G5	S1	Sensitive
<i>Allium parvum</i>	small onion	G5	S2S3	Sensitive
<i>Allium simillimum</i>	dwarf onion	G4	S1	
<i>Arabis fecunda</i>	sapphire rockcress	G2	S2	Sensitive
<i>Athysanus pusillus</i>	sandweed	G4	S1	Sensitive
<i>Camissonia andina</i>	obscure evening-primrose	G4	S1	
<i>Cardamine oligosperma</i> var. <i>kamtschatica</i>	few-seeded bittercress	G5T3T5	S1	
<i>Carex scoparia</i>	pointed broom sedge	G5	S1S2	
<i>Carex stenoptila</i>	small-winged sedge	G2	S1S2	
<i>Castilleja covilleana</i>	Coville Indian paintbrush	G3G4	S2	Sensitive
<i>Centunculus minimus</i>	chaffweed	G5	S2	
<i>Collomia tinctoria</i>	yellow-staining collomia	G5	S1	
<i>Cyperus rivularis</i>	shining flatsedge	G5	S1	
<i>Drosera anglica</i>	English sundew	G5	S2S3	Sensitive
<i>Dryopteris cristata</i>	buckler fern	G5	S2	Sensitive
<i>Erigeron asperugineus</i>	Idaho fleabane	G4	S1	Sensitive
<i>Erigeron evermannii</i>	Evermann fleabane	G4	S1	Sensitive
<i>Erigeron formosissimus</i>	beautiful fleabane	G5	S1	
<i>Erigeron linearis</i>	linear-leaf fleabane	G5	S1	
<i>Eupatorium occidentale</i>	western joe-pye-weed	G4	S2	Sensitive
<i>Glossopetalon spinescens</i>	spiny greasebush	G5	S1	Sensitive
<i>Halimolobos perplexa</i>	puzzling rockcress	G4	S1	
<i>Haplopappus aberrans</i>	Idaho golden-weed	G3	S1	Sensitive
<i>Heterocodon rariflorum</i>	western pearl-flower	G5	S2	Sensitive
<i>Idahoia scapigera</i>	scalegod	G5	S1	Sensitive
<i>Ipomopsis minutiflora</i>	small-flower standing cypress	G4	S1	
<i>Juncus covillei</i> var. <i>covillei</i>	Coville's rush	G5T5	S1	
<i>Juncus covillei</i> var. <i>obtusatus</i>	Coville's blunt rush	G5T4	S1	
<i>Lesquerella humilis</i>	Bitterroot bladderpod	G1	S1	Sensitive
<i>Lewisia columbiana</i>	Columbia lewisia	G4	S1	
<i>Lewisia pygmaea</i> var. <i>nevadensis</i>	Nevada bitterroot	G4	S1	
<i>Listera borealis</i>	northern twayblade	G4	S1S2	
<i>Mimulus nanus</i>	dwarf purple monkeyflower	G5	S1	Sensitive
<i>Mimulus primuloides</i>	primrose monkey-flower	G4	S2	Sensitive
<i>Najas guadalupensis</i>	Guadalupe water-nymph	G5	S1	
<i>Orogenia fusiformis</i>	tapered-root orogenia	G5	S2	Sensitive
<i>Penstemon attenuatus</i> var. <i>militaris</i>	taper-leaved beard tongue	G4T4	SH	
<i>Penstemon globosus</i>	globe beardtongue	G4	S1	
<i>Penstemon lemhiensis</i>	Lemhi beardtongue	G3	S3	Sensitive
<i>Penstemon payettensis</i>	Payette beardtongue	G4	S1	Sensitive
<i>Polystichum scopulinum</i>	mountain holly-fern	G5	S1	
<i>Ribes triste</i>	swamp red currant	G5	S1	
<i>Rotala ramosior</i>	toothcup	G5	S1	
<i>Satureja douglasii</i>	yerba buena	G4	S2	
<i>Saxifraga tempestiva</i>	storm saxifrage	G2	S2	Sensitive
<i>Trifolium eriocephalum</i>	wolly-head clover	G5	S2	Sensitive

Scientific Name	Common Name	Global Rank	State Rank	USFS
<i>Trifolium gymnocarpon</i>	hollyleaf clover	G5	S2	Sensitive
<i>Veratrum californicum</i>	California false-hellebore	G5	S1	Sensitive
<i>Wolffia columbiana</i>	Columbia water-meal	G5	S2	

ADDITIONAL PLANTS LISTED BY THE BITTERROOT NATIONAL FOREST AS SENSITIVE

<i>Ageratina occidentalis</i>	western boneset
<i>Cypripedium parviflorum</i>	yellow lady's-slipper
<i>Epipactis gigantea</i>	giant helleborine
<i>Scheuchzeria palustris</i>	pod grass
<i>Tonestus aberrans</i>	Idaho goldenweed

## Appendix C: *Animal TES Species that may occur in or near the exchange parcels*

Common Name	Scientific Name	Legal Status	Conservation Status Rank <sup>1</sup>	Habitat	Potential for Occurrence on Property
<b><i>Fish</i></b>					
Westslope cutthroat trout	<i>Oncorhynchus clarki lewisi</i>	SSC, DNRC Sensitive	G4T3,S2	Cold water creeks, rivers and lakes, including the Bitterroot River.	Yes – Divide Cr., Rye Cr., Chaffin Cr., Cat House Cr., Sleeping Child Cr.
Bull trout	<i>Salvelinus confluentus</i>	Threatened	G3,S2	Cold water creeks, rivers and lakes including the Bitterroot River.	Yes – Divide Cr., Rye Cr., Chaffin Cr., Switchback Cr., Two Bear Cr., Sleeping Child Cr.
<b><i>Amphibians</i></b>					
Western toad	<i>Bufo boreas</i>	SSC	N4,S4	Variety of aquatic habitats from slow streams, lake and river edges to wetlands and temporary ponds; also found in adjacent uplands (Stebbins 1986, NatureServe 2006).	Potential – in seeps and riparian areas.
Northern leopard frog	<i>Rana pipiens</i>	SSC	G5,S1S3	Variety of aquatic habitats, but usually permanent water with rooted vegetation; also wet meadows and fields in summer (NatureServe 2006).	Unlikely – no recent records in Rye Creek area.
<b><i>Birds</i></b>					
Northern Goshawk	<i>Accipiter gentiles</i>	SSC, Sensitive – DNRC	G5,S3	Wide range of forested habitats, including coniferous and riparian woodlands.	Likely
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Threatened	N5B,N5N, S3B,S4N	Rivers, reservoirs, lakes and adjacent habitats; requires large trees for nesting and roosting.	Likely – limited habitat. No roosts or nest sites in area.
Peregrine Falcon	<i>Falco peregrinus</i>	SSC, Sensitive – DNRC	G4,S2	Various open habitats: woodlands, savannahs, and grasslands. Potential	Unlikely

Common Name	Scientific Name	Legal Status	Conservation Status Rank <sup>1</sup>	Habitat	Potential for Occurrence on Property
Olive-sided Flycatcher	<i>Contopus cooperi</i>	SSC	G4,S3	migrant. Coniferous forest and woodland, especially in burned-over areas with standing dead trees, in subalpine coniferous forest and mixed coniferous-deciduous forest. Bog areas, along the forested edges of beaver ponds and forested wetlands (NatureServe 2006).	Possible – sighting record from mouth of Rye Creek.
Lewis' Woodpecker	<i>Melanerpes lewis</i>	SSC	G4,S2	Open forest and woodland, often logged or burned, including oak, coniferous forest, riparian woodland and orchards, less commonly in pinyon-juniper. Distribution closely associated with open ponderosa pine forest in western North America, and is strongly associated with fire-maintained old-growth ponderosa pine (NatureServe 2006).	Unlikely, possible transient
Black-backed Woodpecker	<i>Picoides arcticus</i>	SSC, Sensitive – DNRC	G5,S2	Coniferous forests, especially dense in recently burned areas.	Yes – widespread sightings in the area.
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Sensitive - DNRC	G5, S4	Dense coniferous or mixed riparian forest. Prefers a tall closed canopy and a high basal area. Most often in areas of extensive forest or minimal isolation from extensive forest	Possible – sightings in the area but limited habitat in burned areas.
Flamulated Owl	<i>Otus flammeolus</i>	SSC, Sensitive – DNRC	G4,S3	Variety of open forest habitats from ponderosa pine forests and oak woodlands to arid shrublands.	Unlikely – surveys by ABC detected no occurrences.



<b>Mammals</b>					
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SSC, Sensitive – DNRC	G4,S2	Shrubsteppe and juniper habitats with canyons and cliffs. Species forms large maternity and hibernation colonies in caves or mines; roosts in caves, buildings, under bridges and in tree cavities.	Possible – foraging habitat present. No records for this area.
Fringed myotis	<i>Myotis thysanodes</i>	SSC	G4,S3	Arid areas with cliffs and talus slopes. Hibernates in caves and mines. Roosts in rock crevices, under loose tree bark, and in buildings. Forms small maternity colonies.	Possible – no records from the area.
Gray wolf	<i>Canis lupus</i>	Endangered	G4,S3	Variety of habitats from tundra to coniferous forests to deserts (NatureServe 2006).	Yes – often seen in association with elk and deer herds in the area.
Grizzly Bear	<i>Ursus arctos horribilis</i>	Threatened	G4T3T4,S2S3	Rare - found in a wide variety of habitats including: open prairie, brushlands, riparian woodlands, and semidesert scrub. Ranges widely at the landscape level. Most populations require huge areas of suitable habitat.	Possible – rare sightings in Rock Creek drainage.

<sup>1</sup> Natural Heritage Program Conservation Status Ranks (NatureServe 2007): G = Global Status, S = State Status; G1 and S1 = Critically Imperiled; G2 and S2 = Imperiled; G3 and S3 = Vulnerable; G4 and S4 = Apparently Secure; G5 and S5 = Secure. If a numeric range is provided (e.g., S3S4), the status is uncertain.

<sup>2</sup> Montana State Species of Special Concern.

## Forest Land Analysis Summary

<b>Project Name:</b>		CB Ranch Land Exchange								
<b>Date Prepared:</b>		5/1/2007		<b>Prepared By:</b>		Liane / Groeschl				
<b>Land Analysis Summary</b>										
<b>Lands to Be Acquired</b>					<b>Lands to Be Sold or Exchanged</b>					
Parcel	Acres	Appraised Land Value	Discounted Net Income	Rate of Return		Parcel	Acres	Appraised Land Value	Discounted Net Income	Rate of Return
A1	640	\$992,000	\$45,147	4.6%		S1	640	\$1,088,000	\$17,334	1.6%
A2	640	\$992,000	-\$6,895	-0.7%		S2	#REF!	#REF!	#REF!	#REF!
A3	#REF!	#REF!	#REF!	#REF!		S3	#REF!	#REF!	#REF!	#REF!
A4	#REF!	#REF!	#REF!	#REF!		S4	#REF!	#REF!	#REF!	#REF!
Summary	#REF!	#REF!	#REF!	#REF!		Summary	#REF!	#REF!	#REF!	#REF!
<b>Future &amp; Present Land Values at 60 years</b>										
		#REF! Future (appreciated) Value (FV) of Land at 60 years						#REF!		
		#REF! Present Value (PV) of Land at 60 years						#REF!		
<b>Instructions:</b>										
1. Enter information into the yellow highlighted cells on worksheets. All other cells are protected.										
2. Worksheets A1 through A4 are to evaluate parcels to be <b>Acquired</b> . Enter the necessary information in the yellow highlighted cells.										
3. Worksheets S1 through S4 are to evaluate parcels to be <b>Sold</b> . Enter the necessary information in the yellow highlighted cells.										
4. Read the results of the analysis in the Analysis Summary.										
<b>Notes or Overall Assumptions:</b>										
1) Parcel S1 does not have legal access. The appraised value w/o access was \$688,000 and \$1,088,000 w/access. 2) Since S1 does not have legal access, it is very uncertain whether the timber sales would actually occur. Therefore, the discounted revenue stream for S1 is best case scenario. If the timber sales do not occur, then the only revenue stream would be the existing grazing lease. 3) Parcels A1 & A2 both have legal access and are appraised at \$992,000 each. 4) Parcels A1 & A2 are more productive (lodgepole pine) and "operable" type ground compared to Parcel S1 which is drier (Doug-fir) and steeper ground. 5) Parcel S1 has about 160 acres of timber and 480 acres of grass whereas Parcels A1 and A2 are entirely forested with young lodgepole pine. 6) In this exchange, the State would pick up twice the acreage, substantially increase the asset value to the trust, and generate slightly more overall net revenue to the trust beneficiaries over the 60-yr period. This meets the three main land exchange criteria of equal or greater acreage, asset value, and revenue to the trust(s). 7) The individual rate of return (ROR) for parcel A1 and the combined ROR for parcels A1 & A2 are both higher than parcel S1. Even though parcel A2 has a negative revenue stream and ROR due to planting costs, the combined ROR for the two parcels to be acquired are higher than the existing state parcel (S1). 8) Assumptions based on field review of CB Ranch parcels (A1 & A2) by Liane, Groeschl, Storer, and Moore on 4/30/07.										

# Forest Land Analysis Model

(Acquired Parcel #1)

Project Name:		CB Ranch Land Exchange			Legal Description of Parcel:			
County:	Ravalli	Township, Range, Section:			Sec 25, T3N, R19W			
	Appraised Value of Parcel:		\$992,000		Acres in Parcel:		640	
	Land is Being Acquired:		1					
	Parcel Number:		1		Discount Rate:		4.00%	
			Single		Single		Discounted	
		Annual	Period	Annual	Period	Annual	Annual	
	Year	Income	Income	Expenses	Expenses	Cash Flow	Cash Flow	
	1	\$300		\$60		\$240	\$240	Outfitter Land Use License (\$300/yr) minus management costs (\$60/yr)
	2					\$240	\$231	
	3					\$240	\$222	
	4					\$240	\$213	
	5					\$240	\$205	
	6					\$240	\$197	
	7					\$240	\$190	
	8					\$240	\$182	
	9					\$240	\$175	
	10					\$240	\$169	
	11					\$240	\$162	
	12					\$240	\$156	
	13					\$240	\$150	
	14					\$240	\$144	
	15				\$9,750	-\$9,510	-\$5,492	
	16					\$240	\$133	
	17					\$240	\$128	
	18					\$240	\$123	
	19					\$240	\$118	
	20					\$240	\$114	
	21					\$240	\$110	
	22					\$240	\$105	
	23					\$240	\$101	
	24					\$240	\$97	
	25					\$240	\$94	
	26					\$240	\$90	
	27					\$240	\$87	
	28					\$240	\$83	
	29					\$240	\$80	
	30		\$144,000		\$60,000	\$84,240	\$27,012	Harvest 150 acs x 4,000 BF/ac (600 MBF @ \$240/MBF) minus sale prep costs (\$100/MBF)
	31					\$240	\$74	
	32					\$240	\$71	
	33					\$240	\$68	
	34					\$240	\$66	
	35					\$240	\$63	
	36					\$240	\$61	
	37					\$240	\$58	
	38					\$240	\$56	
	39					\$240	\$54	
	40		\$144,000		\$60,000	\$84,240	\$18,248	
	41					\$240	\$50	
	42					\$240	\$48	
	43					\$240	\$46	
	44					\$240	\$44	
	45					\$240	\$43	
	46					\$240	\$41	
	47					\$240	\$40	
	48					\$240	\$38	
	49					\$240	\$37	
	50					\$240	\$35	
	51					\$240	\$34	
	52					\$240	\$32	
	53					\$240	\$31	
	54					\$240	\$30	
	55					\$240	\$29	
	56					\$240	\$28	
	57					\$240	\$27	
	58					\$240	\$26	
	59					\$240	\$25	
	60					\$240	\$24	
						\$172,650	\$45,147	

# Forest Land Analysis Model

(Acquired Parcel #2)

Project Name:	CB Ranch Land Exchange				Legal Description of Parcel:		
County:	Ravalli	Township, Range, Section:			Sec 1, T3N, R20W		
	Appraised Value of Parcel:		\$992,000		Acres in Parcel:	640	
	Land is Being Acquired:		1				
	Parcel Number:		2		Discount Rate:	4.00%	
			Single		Single	Discounted	
	Annual	Period	Annual	Period	Annual	Annual	
Year	Income	Income	Expenses	Expenses	Cash Flow	Cash Flow	Description of Activity
1	\$300		\$60		\$240	\$240	Outfitter Land Use License (\$300/yr) minus management costs (\$60/yr)
2					\$240	\$231	
3				\$2,000	-\$1,760	-\$1,627	Weed Spraying @ \$2,000
4					\$240	\$213	
5				\$26,700	-\$26,460	-\$22,618	Plant 100 acres @ \$267/ac (\$26,700)
6					\$240	\$197	
7					\$240	\$190	
8					\$240	\$182	
9					\$240	\$175	
10					\$240	\$169	
11					\$240	\$162	
12					\$240	\$156	
13					\$240	\$150	
14					\$240	\$144	
15					\$240	\$139	
16					\$240	\$133	
17					\$240	\$128	
18					\$240	\$123	
19					\$240	\$118	
20					\$240	\$114	
21					\$240	\$110	
22					\$240	\$105	
23					\$240	\$101	
24					\$240	\$97	
25					\$240	\$94	
26					\$240	\$90	
27					\$240	\$87	
28					\$240	\$83	
29					\$240	\$80	
30					\$240	\$77	
31					\$240	\$74	
32					\$240	\$71	
33					\$240	\$68	
34					\$240	\$66	
35					\$240	\$63	
36					\$240	\$61	
37					\$240	\$58	
38					\$240	\$56	
39					\$240	\$54	
40		\$60,000		\$4,000	\$56,240	\$12,183	Post & Pole Sale: (200 ac x \$300/ac) minus \$20/ac for prep/admin costs
41					\$240	\$50	
42					\$240	\$48	
43					\$240	\$46	
44					\$240	\$44	
45					\$240	\$43	
46					\$240	\$41	
47					\$240	\$40	
48					\$240	\$38	
49					\$240	\$37	
50					\$240	\$35	
51					\$240	\$34	
52					\$240	\$32	
53					\$240	\$31	
54					\$240	\$30	
55					\$240	\$29	
56					\$240	\$28	
57					\$240	\$27	
58					\$240	\$26	
59					\$240	\$25	
60					\$240	\$24	
					\$41,700	-\$6,895	



# Forest Land Analysis Model

(Sold Parcel # 1)

Project Name:		CB Ranch Land Exchange			Legal Description of Parcel:		
County:	Ravalli	Township, Range, Section:			Sec 36, T4N, R21W		
	Appraised Value of Parcel:		\$1,088,000		Acres in Parcel:	640	
	Land is Being Sold:		0				
	Parcel Number:		1		Discount Rate:	4.00%	
			Single		Single	Discounted	
	Year	Annual Income	Period Income	Annual Expenses	Period Expenses	Annual Cash Flow	
	1	\$197		\$50		\$147	
	2					\$147	
	3					\$147	
	4					\$147	
	5		\$60,000		\$44,200	\$15,947	
	6					\$147	
	7					\$147	
	8				\$4,200	-\$4,053	
	9					\$147	
	10					\$147	
	11					\$147	
	12					\$147	
	13					\$147	
	14					\$147	
	15					\$147	
	16					\$147	
	17					\$147	
	18					\$147	
	19					\$147	
	20					\$147	
	21					\$147	
	22					\$147	
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	38					\$147	
	39					\$147	
	40					\$147	
	41					\$147	
	42					\$147	
	43					\$147	
	44					\$147	
	45	\$60,000		\$40,000		\$20,147	
	46					\$147	
	47					\$147	
	48					\$147	
	49					\$147	
	50					\$147	
	51					\$147	
	52					\$147	
	53					\$147	
	54					\$147	
	55					\$147	
	56					\$147	
	57					\$147	
	58					\$147	
	59					\$147	
	60					\$147	
						\$40,420	
						\$17,334	